

Town of New Haven

Town Plan

Adopted

March 7, 2017

Table of Contents		Areas That Are Unsuitable For Siting Those Resources Or Particular Categories Or Sizes Of Those Resources	
Introduction	2	Environmental Constraints	58
Geography and History	3	Standard Offer Projects	63
Policies & Goals	6	Consistency with Various State Energy Goals	65
Population and Housing	12	Siting, Screening and Performance Standard	70
Population	14	Applicable to All Utility/§248 Projects in New Haven	
Households and Families	16	Solar Siting, Screening and Setbacks	72
Disability	19	Energy Plant Siting Standards	73
Geographic Mobility	19	Siting and Screening Requirements	78
Education	19	Natural Resources	81
Housing Characteristics	20	Waterways and Wetlands	85
Housing Costs	21	Flood Resilience Plan	86
Local Economy and Economic Development	21	Scenic Resources	88
Agricultural Sector	21	Cultural Resources: Addison County Farm & Home	94
Business Sectors	23	Field Days, Inc	
Employment Status and Type of Employer	26	Historic Resources	96
Income	28	Land Use Plan	98
Poverty and Participation in Government	29	Land Use Planning Areas	101
Programs		Municipal District	104
Health Insurance	30	New Haven Village Center Planning Area	104
Utility and Facilities Plan	30	New Haven Mills Village Planning Area	106
Town Lands	30	Rural Planning Area	106
Structures	31	Business Planning Area	108
Other Community Resources	32	Compatibility	112
Public Utilities and Services	34	Recommended Actions	114
Education Facilities Plan	35	Implementation	114
Transportation	37	Comments from Residents	118
Vehicular Transportation	38	Appendices	
Rail Transportation	41	Town Plan Process and Community Input	119
Air Transportation	41	Historic Resources	119
Public Transportation	41	All Hazards Plan	119
Bicycle Travel, Walking & Horseback Riding	41		
Transportation and Energy	41		
Energy Plan	42		
Energy Infrastructure, Facilities and Service	46		
Background: New Haven's Experience with	48		
Utility and Non-Utility Projects			
Analysis Of Energy Resources, Needs,	50		
Scarcities, Costs, And Problems Within The			
Region, Across All Energy Sectors, Including			
Electric, Thermal, And Transportation			
<hr/>			
Statement Of Policy On The Conservation And	55		
Efficient Use Of Energy And The Development			
And Siting Of Renewable Energy Resources			
Statement of Policy on Patterns & Densities of	56		
Land Use and Control Devices Likely to Result in			
Conservation of Energy			
Identification Of Potential Areas For The Development	58		
And Siting Of Renewable Energy Resources And			

Introduction

New Haven's past and present form the foundation for our vision of our future. Our Town Plan contains policies and recommendations based on that vision to guide future development in the Town. For more than 250 years, New Haven's economy, land use, character and way of life has been and remains strongly linked to agriculture. We have a fervent desire to continue this strong agricultural and rural heritage and the scenic cultural and natural landscape it creates.

Globalization, new technology and a multitude of economic and development pressures pose threats to the continued existence of family farms all over the country, including in Addison County and New Haven. Although farms are still the most visible use of land in the Town, the number of houses increases slowly but steadily, and a growing number of Townspeople commute outside New Haven to work. This Town Plan reflects New Haven's very strong support of farming and scenic vistas, and the cultural, economic and visual benefits that agricultural use provides.

Preservation of New Haven's visual pastoral vernacular, which has been formed by agricultural and farming activities and is reflected in the context, scale, and proportion of its farm structures, buildings and homes, and how these elements create vistas that are harmoniously integrated into the topography of the land, are of paramount importance to the Town's character and economy, including quality of life,

property values, local businesses and tourism.



*New Haven Town Green in a prior century
photo supplied by Beverly Landon*

The Vermont State legislature grants Towns the ability to plan and zone the land within their borders to “conserve the value of property and encourage the most appropriate use of land.” All future development within the Town must be managed and fit within New Haven's existing landscape and aesthetic. State statute also describes statewide goals to be incorporated into municipal objectives.

The primary purpose of the Town Plan is to assess the Town's present condition, describe the community's desires for the future, and provide recommendations governing future changes and development to protect the Town's natural, agricultural, historic and scenic resources, public health, safety and welfare, and property values. The Town Plan provides the vision; Town zoning and subdivision bylaws implement the recommendations of the Plan through regulation. Both the Town Plan and the zoning and subdivision regulations reflect a democratically established vision that

balances the rights of individual property owners with the needs of the larger community.

This 2017 New Haven Town Plan has been created through significant input from the community. The Planning Commission invited public input to the planning process at numerous meetings throughout 2015; in addition to the required public hearings, they conducted a community survey, and held a day-long workshop soliciting input, information-sharing and comments from community residents. Significant public input was received, particularly in regards to energy siting and commercial development.

The Selectboard received the Town Plan from the Planning Commission on July 12, 2016. There were items required by statute that were not included in the Town Plan as presented by the Planning Commission. Additionally, due to the rapidly evolving regulations concerning energy production, the Selectboard began a rewrite of the Town Plan, utilizing the goals and objectives from the Planning Commission, adding stronger language

concerning energy siting, including the enhanced energy planning sections delineated by Act 174, and adding those areas that were deficient, particularly the Flood Resiliency Plan.

On October 25, 2016, the Selectboard held a properly warned hearing on the Town Plan as forwarded by the Planning Commission. The hearing was attended by 14 residents in addition to members of the Selectboard. It was made clear at the hearing that the Selectboard was rewriting the Town Plan. The Selectboard held two working meetings, which were properly warned and open to the public. The first was held in the morning of Saturday, August 20, 2016 which was attended by four residents. Areas of deficiencies were identified and assigned to specific Selectboard members to research and write up. The second was held in the afternoon of October 29, 2016, with two residents present. In addition to information received from residents at its hearing and workshops, the Selectboard relied on the survey and Planning Commission's public meetings for its direction of the residents of the Town.

Geography and History

New Haven is located in north-central Addison County, in the Champlain Valley. It is bordered by Ferrisburgh and Monkton to the north, Bristol to the east, Middlebury to the south, Weybridge to the southwest, and Waltham to the northwest. The town of Addison also touches New Haven at one corner.

Otter Creek, one of the longest rivers in Vermont, forms part of the town's southwest border, with falls at Belden and Huntington Falls. The New Haven River, rising to the east in the Green Mountains, flows into Otter Creek at Brooksville.

US Route 7 runs north-south through the town, connecting Vergennes and Middlebury. Vermont Route 17 crosses Route 7 at New Haven junction and runs east into Bristol and west to Addison and the Crown Point Bridge over Lake Champlain into New York. The town has a total area of 41.5 square miles.

There is ample evidence that the first inhabitants of New Haven were Native Americans, especially in the Otter Creek valley. There was plenty of food and the forests were a mixture of trees. They used the birches for canoes, white pine for dugouts, brown ash for baskets, butternut for bows, and white cedar for arrows. These earliest inhabitants continue to be present in the Town through archaeological evidence that emerges from the ground, particularly in the form of points and tools often unearthed when farmland is tilled. Earl Bessette donated his collection of points to the Town which can be seen in a case in the Town Offices. Warren Whitcomb donated his collection of points, weapons and tools to the Beeman School which is in cases in the School Library. All of these artifacts were found in New Haven, primarily on the Bessette and Whitcomb properties.



New Haven point collection, donation of Earl Bessette. Photo: Kathleen Barrett

New Haven was chartered in 1761 by Governor Wentworth of New Hampshire. Proprietors under the Wentworth Charter handled civic affairs until the citizenry was able to form a government. The first official Town Meeting and election of officers was held in March 1787.

At one point, there were 14 different school districts in Town.



Old New Haven Vt. Postcard, online auction

The Town had several settlements, including “Brooksville” on Dog Team Road, and “the Mills”, both of which were homes to industry, utilizing the waterpower of the New Haven River. There were several sawmills, pulp mills, tanneries, gristmills, and even a distillery. Cloth factories sprung up, but were unable to compete with the mass production offered by the textile mills in southern New England.

Agriculture was -- and is -- the backbone of the Town. Early farmers were self-sufficient, raising cattle, sheep and pigs in addition to harvesting crops and forest products.

In 1983, “A History of New Haven in Vermont 1761-1983” was published. The Town Historian, Harold Farnsworth, put together this compilation of facts and stories about the Town with the help of numerous residents. The book includes a history of the properties and landowners from the first 222 years. It is available for purchase in the Town Office.



Policies and Goals

24 VSA §4382(a)(1)

- Goal 1. To protect New Haven’s scenic, rural and agricultural character while supporting a diverse range of housing options and business opportunities.
- Objective A. Strengthen the traditional pattern of small, densely settled enclaves, surrounded by large areas of farm and forestland in order to protect the Town’s rural character and maintain an adequate base of working lands.
 - Objective B. Promote sustainable development, reinforcing traditional land use patterns and Town development policies, maximizing energy efficiency and conservation through weatherization of existing structures and appropriate siting and design of new structures.
 - Objective C. Maintain the Town Community Center (also referred to as the Town Offices) that includes the Town offices and library, Beeman Elementary School, and the Town Green as the hub of community life and promote the development of a strong Town center. Create a Municipal District .
-
- Goal 2. To preserve and promote the economic viability of agriculture.
- Objective A. Support viability of the Town’s family farms in cooperation with state and federal government programs and private efforts.
 - Objective B. Protect the right to farm in accordance with required agricultural practices, including those that generate odors and noise, regardless of the presence of nearby development.
 - Objective C. Support diversification of the Town’s agricultural economy, including production of local food and other value-added agricultural and silvicultural products as well as biomass or methane energy production that utilizes farm waste (crop waste, manure), to expand farmers’ income.

- Objective D. Limit or preclude future development, particularly commercial development projects, away from productive agricultural lands and prime and other valuable agricultural soils in order to ensure an adequate land base for future generations of farmers.
 - Objective E. Site and design non-farm commercial, industrial and utility development to prevent adverse impacts on prime agricultural soils.
 - Objective F. Site and design non-farm commercial, industrial and utility development to prevent adverse impacts on statewide important agricultural soils that have been in active cultivation at any time since January 1, 2010.
 - Objective G. Support the actions of landowners, land trusts and other parties to permanently protect agricultural and scenic land through voluntary conservation easements, and explore ways for the Town to participate or assist in these efforts.
-

Goal 3. To provide housing that supports a diverse population, allowing those who choose to do so to live in New Haven throughout their lives, while maintaining the Town's rural character.

- Objective A. Allow development of senior and affordable housing, particularly in proximity to the Village Center, Junction and major travel corridors where residents will have more convenient access to services and transportation.
 - Objective B. Cooperate with and support the efforts of non-profit organizations to provide affordable and senior housing for Town residents.
-

Goal 4. To protect the natural, cultural, historic and aesthetic resources which create the Town's unique character and sense of identity.

- Objective A. Maintain the natural appearance of ridges and steep slopes by restricting development that degrades scenic and environmental quality.

- Objective B. Site future land development below ridgelines, and require design that precludes new structures from being visible against the skyline from public vantage points.
- Objective C. Identify and limit or preclude adverse development impacts on ecologically sensitive and significant natural areas, and maintain high environmental quality.
- Objective D. Support the efforts of landowners, land trusts and other parties to permanently protect ecologically sensitive and significant natural and scenic areas through voluntary conservation easements or purchase of land for conservation purposes.
- Objective E. Support the agricultural use of lands that, if in their natural state would be classified as wetlands, in accordance with state and federal regulations, while encouraging all landowners to maintain naturally vegetated buffers around or along surface water features.
- Objective F. Improve and protect water quality and aquatic habitat in the Town's watersheds, waterways and wetlands by limiting development near these important natural resources.
- Objective G. Support the efforts of organizations like the Addison County River Watch Collaborative.
- Objective H. Guide development away from mapped deer yards, and other significant habitat areas or travel corridors including habitat for state or federally identified species of significance, threatened species or endangered species such as the bobolinks and the Indiana bat, in order to maintain healthy wildlife populations, which are an important element of the Town's rural character.
- Objective I. Recognize that the beauty of the Town's pastoral landscape is a result of generations of farming, and support continued agricultural use, efforts to conserve land, preservation of historic buildings and careful siting of new development within scenic viewsheds.
- Objective J. Site and design future land development to prevent adverse visual impacts on public vantage points including roadways,

Town lands, recreation facilities and Town trails, scenic viewsheds, and surrounding private properties.

- Objective K. Identify and promote appropriate rehabilitation, maintenance, continued use and/or adaptive reuse of historic structures.
 - Objective L. Site and design future land development to prevent or preclude forest fragmentation, environmental degradation and habitat destruction.
 - Objective M. Establish a Town conservation fund to serve as a source of funding to permanently conserve areas with valuable agricultural, scenic, and/or natural resource qualities. Possible sources of funding for a conservation fund could include public and private grants, taxpayer appropriations, donations, and compensation payments made by developers of energy projects or other significant commercial or large-scale residential development projects.
-

Goal 5. To manage the rate of industrial, commercial and residential growth in accordance with the capacity of the Town to provide services.

- Objective A. Envision and plan for long-term Town objectives over short-term solutions.
 - Objective B. Recognize the need for and feasibility of an annual limit on new residential development.
-

Goal 6. To foster a diverse economy by accommodating small businesses, clean light industries, and agri-businesses.

- Objective A. Allow residents to work from home or operate home-based businesses to the extent that such activities are of a scale and impact that is compatible with surrounding land uses.
- Objective B. Allow residents working from home or operating home-based businesses to reuse existing accessory buildings for their operations.
- Objective C. Guide new small businesses to appropriate locations, particularly currently vacant or under-utilized commercial or industrial buildings or sites.

Objective D. Ensure availability of local child care by being receptive to child care proposals as home occupations and or conditional uses for larger facilities.

Goal 7. To encourage energy conservation and the responsible development and use of renewable energy sources in a manner that preserves New Haven's rural landscape and character.

Objective A. Encourage energy conservation to reduce energy consumption and costs for New Haven's residents, businesses and public institutions.

Objective B. Support appropriate development of renewable energy projects that serve the on-site residential, home occupation, small business or agriculture energy use requirements of New Haven residents and are sited and designed to prevent adverse visual impacts on public vantage points (including roadways, public lands, trails and recreation facilities) and surrounding private properties.

Objective C. Site and design all energy and utility projects, including generation, transmission or distribution facilities, to preclude adverse impacts on public health, safety and welfare (including economic impacts), the Town's historic and planned pattern of development, environmentally sensitive areas, prime agricultural soils, and New Haven's most highly valued natural, cultural and scenic resources, consistent with the adopted plan policies and community standards for energy development, resource protection and land conservation.

Objective D. Ensure that all energy and utility projects, including generation, transmission or distribution facilities, developed within the Town provides appropriate benefits to affected residents and to the Town as a whole.

Objective E. Continue to support local recycling efforts.

Goal 8. To provide energy- and cost-efficient transportation systems that meet the needs of Town residents and businesses.

- Objective A. Be selective when increasing Class 2 and 3 Town highway mileage due to the high cost of road maintenance. Ensure that there is a cost benefit to the Town and its residents.
- Objective B. Maintain and promote road quality: Precede any new paving with roadbed upgrades to standards that will match anticipated increases in weight, speed and traffic, and require any new private roads to meet roadway standards.
- Objective C. Limit new curb cuts on public roads to minimize safety problems.
- Objective D. Support continued use of the existing rail system in Town and recognize the importance of both rail bed and sidings in its operation.
- Objective E. Encourage the State to ensure that all rail-highway junctures be properly marked and maintained to limit their dangers, while retaining the current system of ground-level crossings.
- Objective F. Promote and encourage use of public transportation and carpooling by maintaining and creating designated park and ride sites at appropriate locations.
- Objective G. Support pedestrian, bike and equine use of Class 4 roads and legal trails to encourage healthy lifestyles and energy-efficient transportation.

Goal 9. To protect and strengthen New Haven Village as a civic and historic center for the Town.

- Objective A. Maintain state Village Center designation for New Haven village.
- Objective B. Explore opportunities to enhance vitality of the Village Center.

Goal 10. To coordinate Town planning and zoning activities with regional and state interests.

- Objective A. Be involved in all local, regional and state planning and development issues and processes to ensure that the Town's citizens are well represented.

Population and Housing

24 VSA §4382(a)(10)

Population Growth Trends. The 2010 Census reported New Haven's population as 1,727. The Town has yet to surpass its historic 1830 peak population of 1,834.

According to the Census Bureau, New Haven's population is increasing at a slightly faster rate than state or county averages. During the 2000s, New Haven's growth rate slowed, but remained higher than state and county averages. New Haven is clearly a desirable place to live, and modest population growth is expected to continue.

Most of the growth occurring during the past two decades has been a result of natural increase (births minus deaths) rather than in-migration of new residents.

Population Profile. New Haven residents are somewhat younger and more likely to be living in a household with children than state and county averages, indicating that the Town remains attractive to families. Most of these families own their home and live in a detached single-family house. Median income of households in New Haven is also higher than state or county averages.

Over the past several decades, New Haven has become a bedroom community. Most wage earners worked outside of Town in 2012, with 55% commuting to jobs in Addison County and 25% commuting to

jobs in Chittenden County, according to U.S. Census Bureau Center for Economic Studies data. According to the U.S. Census, the average commuting time for New Haven workers in 2014 was 25 minutes, an increase of 3 minutes since 2000. This increase is likely a result of the growing number of New Haven residents working in Chittenden County.

The last several years have also seen a renewed interest in growing the local economy. It appears that the number of people self-employed or working from home has continued to recover during the past two decades after the sharp decline experienced during the 1980s. The exact number of residents working in Town is difficult to determine. There are conflicting estimates from the Census Bureau that suggest the number may be as low as 50 or as high as 280 in people in 2013. This may be partially explained by how these surveys count residents with more than one job. Anecdotal evidence suggests that there are a significant number of New Haven residents that work a job out of Town but have a secondary home business, farm business or other employment in Town as well. The Town supports home occupation and home business as a tool to increase economic development within the Town, along with agriculture and agriculture-related businesses to increase

employment and self-employment opportunities within the Town and reduce the need for more residents to commute ever-greater distances to work.

Housing Development Trends. The 2010 Census counted 733 housing units in New Haven, 4.5% of which were vacant. Less than 2% of the Town's housing stock was classified as seasonal, and of the year-round units, nearly 80% were owner-occupied.

According to Town zoning permit data, around 25 homes were built between 2010 and 2014. This represents significantly fewer than were constructed during the period of 2000 through 2009.

Clearly, there was a dramatic slowing of construction due to economic downturn. During the last decade, the Town averaged 15 new homes each year; at the peak of the housing boom around 20 new homes were constructed annually.

The new homes built during the last 20 years have caused a demographic shift in the age of housing units. Prior to the 1990s, the majority of houses in New Haven were built before 1940; now, the majority of the homes have been built since 1960.



Housing Needs. The Town should consider options to maintain or develop housing affordable to low- and moderate-income families if housing costs continue to escalate. It would be undesirable for the Town to become entirely unaffordable, particularly to younger residents and families. An aging demographic affects many aspects of a community including its school and provision of emergency services.

Traditionally, larger Towns in the region have been the focus of affordable housing development. New Haven could work with appropriate non-profit organizations to increase the Town's affordable housing supply.

The Town's demographic profile also speaks to a growing need for elderly housing. While much of the demand for elderly housing is currently being met in nearby larger communities, it is unfortunate that seniors have to move out of New Haven to find suitable housing when they no longer can or desire to stay in their current homes.

The Town's zoning and subdivision bylaws should reflect the Town's desire to encourage affordable housing development and housing for elders within our community.



Historic housing frames the New Haven Town Green. Photo: Mike Lawrence, landscape architect.

Population and Housing Data

The following data and charts have been obtained from the United States Census Bureau American Community Survey. Generating a Population and Housing Narrative Profile produced this information for the New Haven area; however, the Census Data for rural areas disaggregates by postal zip code rather than by Town. This information, therefore, is for the 05472 zip code rather than for the Town of New Haven. The 05472 zip code covers nearly all of the Town of New Haven, and includes small portions of Ferrisburgh and Monkton. The development and population patterns in these adjoining areas are, however, quite similar to those in New Haven. This data therefore is a fair approximation of the information for New Haven, and is valuable for purposes of land use

planning, economic development, and other civic purposes within New Haven. Information contained within these paragraphs in *italics* indicates material inserted for purposes of comparing New Haven with state averages or data to provide context.

Population

In 2010-2014, 05472 has a total population of 1,600 -- 737 (47 %) females and 847 (53 %) males. The median age was 46.9 years. An estimated 18% of the population was under 18 years and 17% was 65 years and older. *New Haven has more men and fewer women than state and national averages of 51% female and*

49% male. New Haven's age distribution is about equal to the state as a whole.

Figure 1. Age Distribution of People in 05472 in 2010-2014

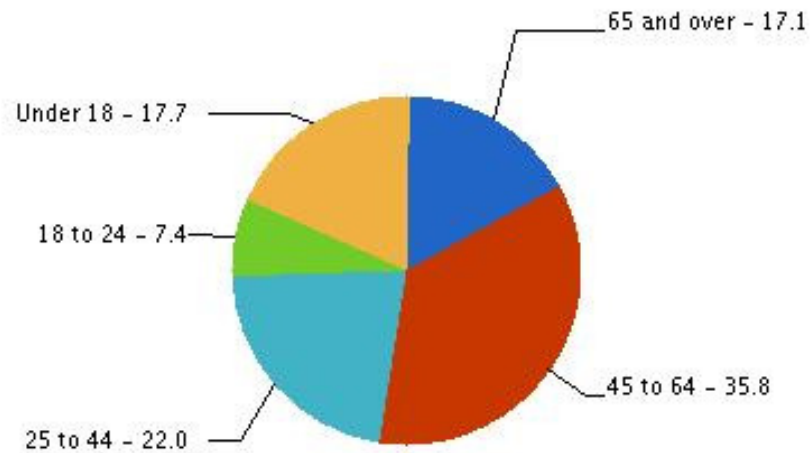


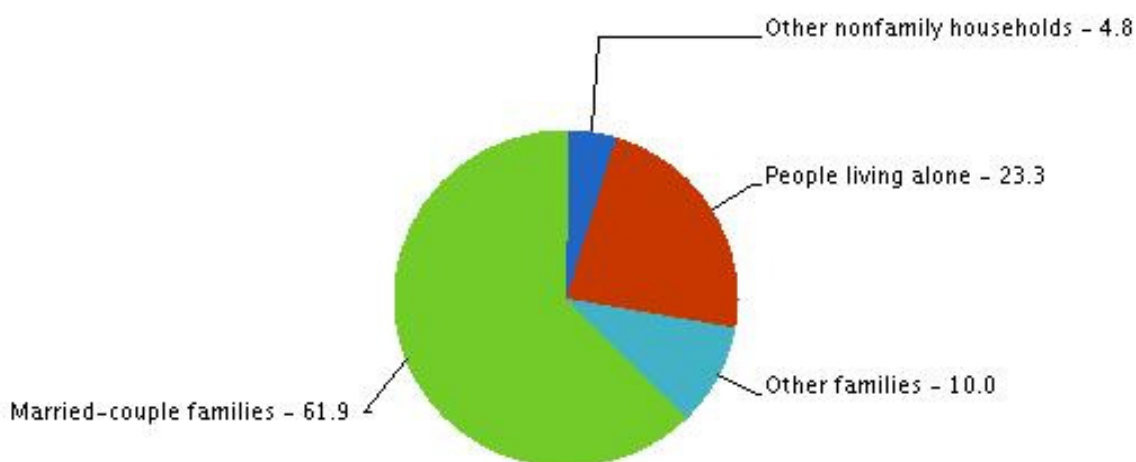
Figure 2. Population 15 years and over

Population 15 years and over	Males	Females
Never married	26.6	13.2
Now married, except separated	59.3	63.5
Separated	2.2	0.0
Widowed	5.0	7.0
Divorced	6.8	16.3

Households and Families

In 2010-2014 there were 651 households in 05472. Average household size was 2.4 people. Families made up 72% of the households. This figure includes both married-couple families (62%) and other families (10%). Of other families, 4% are female householder families with no husband present and her own children under 18 years. Nonfamily households made up 28% of all households. Most nonfamily households were people living alone, but some were composed of people living in households in which no one was related to the householder. In 05472, 27% of all households have one or more people under the age of 18; 31% of all households have one or more people 65 years and over.

Figure 3. Types of Households in 05472 in 2010-2014



In 05472, 10 grandparents lived with their grandchildren under 18 years old. Of those grandparents, less than 0.5 % of them had financial responsibility for their grandchildren.

New Haven has a significantly higher percentage of family households than the state average of 63%. New Haven's age distribution is at the state average.

	New Haven	Addison County	Vermont
Population Count			
1950	932	19,442	377,738
1960	922	20,076	389,881
1970	1,039	24,266	444,731
1980	1,217	29,406	511,456
1990	1,375	32,953	562,758
2000	1,666	35,974	608,827
2010	1,727	36,821	625,741
Population Growth (average annual growth rate)			
1950s	-0.1%	0.3%	0.3%
1960s	1.2%	1.9%	1.3%
1970s	1.6%	1.9%	1.4%
1980s	1.2%	1.1%	1.0%
1990s	1.9%	0.9%	0.8%
2000s	0.4%	0.2%	0.3%
Household Count			
1960	234	5,229	110,754
1970	267	6,627	132,041
1980	403	9,386	178,394
1990	500	11,410	210,650
2000	613	13,068	240,624
2010	689	14,084	256,442
Household Growth (average annual growth rate)			
1960s	1.3%	2.4%	1.8%
1970s	4.2%	3.5%	3.1%
1980s	2.2%	2.0%	1.7%
1990s	2.1%	1.4%	1.3%
2000s	1.2%	0.8%	0.6%
Average Household Size			
1990	2.83	2.68	2.57
2000	2.72	2.55	2.44
2010	2.51	2.41	2.34
Housing Unit Count			
1950	261	6,420	121,911
1960	300	7,025	136,307
1970	293	8,535	165,063
1980	425	12,002	223,198
1990	544	14,022	271,214
2000	646	15,312	294,382
2010	733	16,760	322,539
Housing Unit Growth (ave annual growth rate)			
1950s	1.4%	0.9%	1.1%
1960s	-0.2%	2.0%	1.9%
1970s	3.8%	3.5%	3.1%
1980s	2.5%	1.6%	2.0%
1990s	1.7%	0.9%	0.8%
2000s	1.3%	0.9%	0.9%

Source: U.S. Census Bureau

FIGURE 1. DEMOGRAPHIC PROFILE

	New Haven			Addison County			Vermont		
	1990	2000	2010	1990	2000	2010	1990	2000	2010
Age Profile									
<18 yrs	27.8%	26.4%	22.0%	26.2%	24.8%	20.4%	25.5%	24.2%	20.7%
18-24 yrs	7.8%	7.6%	6.2%	13.5%	12.7%	13.0%	11.0%	9.3%	10.3%
24-44 yrs	37.2%	29.6%	23.3%	33.2%	26.9%	21.6%	33.5%	29.0%	23.6%
45-64 yrs	17.5%	26.8%	37.2%	16.7%	24.3%	31.1%	18.2%	24.8%	30.8%
65+ yrs	9.7%	9.7%	11.3%	10.4%	11.3%	13.9%	11.8%	12.7%	14.6%
Household Composition									
Single Person	18.4%	16.2%	19.4%	20.7%	23.3%	25.5%	23.4%	26.2%	28.2%
Married w/o Children	31.4%	34.3%	37.6%	29.3%	31.4%	33.5%	28.4%	29.3%	30.9%
Married w/ Children	35.6%	30.2%	22.1%	31.9%	26.7%	19.8%	28.1%	23.2%	17.6%
Single Parent	6.8%	6.9%	7.7%	7.9%	7.8%	7.6%	8.2%	8.5%	8.6%
Other	7.8%	12.6%	13.2%	10.3%	10.8%	13.6%	11.9%	12.7%	14.7%
Housing Unit Tenure									
Owner	74.3%	76.5%	76.5%	60.5%	63.9%	63.6%	57.7%	63.9%	56.2%
Renter	17.6%	18.4%	17.5%	21.0%	21.5%	20.4%	24.1%	21.5%	23.3%
Seasonal	1.3%	1.9%	1.5%	13.8%	11.4%	10.9%	14.6%	11.4%	15.6%
Vacant	6.8%	3.3%	4.5%	4.6%	3.3%	5.0%	3.6%	3.3%	4.9%
Housing Unit Structure Type									
Single Family	75.2%	79.6%	82.5%	70.7%	73.9%	73.9%	61.8%	66.6%	65.9%
Mobile Home	10.7%	7.3%	8.2%	10.8%	9.9%	9.9%	8.3%	7.8%	7.4%
Multi Family	11.9%	13.2%	9.3%	16.3%	16.0%	16.2%	27.8%	25.4%	26.2%
Other	2.2%	0.0%	n/a	2.2%	0.2%	n/a	2.1%	0.2%	n/a
Annual Income (adjusted to 2010\$ using the CPI and expressed in thousand\$)									
Per Capita	24.6	27.9	29.9	22.3	25.6	26.6	23.8	27.0	24.5
Median Household	56.6	61.5	62.2	52.9	56.5	55.8	52.4	53.5	51.8
Median Family	62.4	68.2	68.2	60.2	64.6	67.7	60.6	63.6	64.1

Source: U.S. Census Bureau

Figure 4. Demographic Profile

	1990	1992	1994	1996	1998	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Vital Statistics and Population																				
Births	24	23	28	21	23	19	21	13	18	11	26	16	19	15	10	20	12	14	11	10
Deaths	9	8	10	9	11	8	11	11	10	13	6	14	7	13	12	12	20	10	4	7
Population	1,375	1,433	1,503	1,568	1,611	1,666	1,670	1,694	1,731	1,763	1,790	1,801	1,820	1,829	1,826	1,727	1,723	1,747	1,743	1,741
Voters	725	835	929	947	1,109	1,091	1,092	1,100	1,110	1,112	1,165	1,174	1,189	1,216	1,302	1,274	1,322	1,234	1,287	1,210
Land Use and Development																				
New Homes	14	14	14	13	15	10	9	21	20	15	13	10	17	3	4	5	11	1	2	3
Lots Created																	14	4	5	2
Total Parcels		697	716	734	754	789	803	814	817	822	830		836	839	844	845	854	856	859	860
Total Dwellings			434	452	480	506	514	528	528	533	534									
R-1 Parcels						199	202	202		200			213	220	224	226	228	231	234	235
R-1 Acres						388	398	398		405										
R-2 Parcels						259	270	270		293			314	323	328	326	335	337	337	337
R-2 Acres						8,306	8,063	8,063		7,911										
Farm Parcels						37	36	36		37			37	36	37	37	37	36	36	37
Farm Acres						7,704	7,530	7,530		7,489										
Current Use Parcels																				149
Current Use Acres									13,763	13,650		133	136	135	132	138	141	143	143	145
Housing Sales and Affordability (all dollar amounts adjusted to 2014\$ using the CPI and expressed in thousands\$)																				
Number	9	8	22	15	15	16	13	12	14	26	19	21	11	4	10	13	17	11	15	12
Median Price	1513	1712	1585	1433	1756	1754	1825	221.7	243.2	231.8	272.7	293.4	216.8	320.1	255.2	216.1	288.4	150.3	264.2	228.1
Annual Income to Afford Med. Home	448	505	469	425	51.8	51.8	53.9	65.2	71.3	68.3	79.9	86.1	63.9	93.8	74.8	63.6	84.6	44.5	77.4	67.1
Med. Family AGI						66.3	68.5	66.2	68.4	67.5	69.3	69.9	69.6	66.9	64.0	64.6	67.5	71.9		
School Enrollment																				
Beenan (K-6)	149	147		172	169	159	152	160	149	159	148	138	132	119	110	96	103	109	98	91
Mt. Abe (7-12)																				
Employment (all dollar amounts adjusted to 2014\$ using the CPI and expressed in thousands\$)																				
Establishments	36	36	41	48	57	66	67	65	68	69	68	70	69	73	78	82	86	84	83	81
Employees	259	214	226	294	475	520	553	541	576	593	525	504	515	545	546	549	541	561	589	641
Ave. Annual Wage	267	310	26.0	25.3	26.1	27.1	26.6	28.9	29.6	30.6	32.8	33.4	35.0	36.0	35.8	37.3	39.1	40.3	41.6	43.2

Source: Annual Town Report, Town Grand List, VT Dept. of Taxes, VT Dept. of Education, VT Dept. of Labor

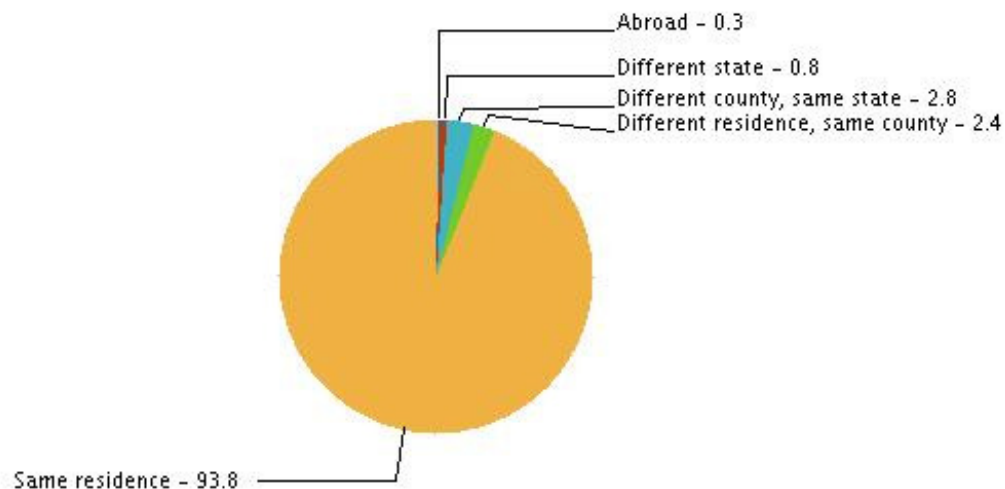
Disability

In 05472, among the civilian non-institutionalized population in 2010-2014, 12% reported a disability. The likelihood of having a disability varied by age - from 4% of people under 18 years old, to 8% of people 18 to 64 years old, and to 34% of those 65 and over. *This data is about equal with statewide averages.*

Geographic Mobility

In 2010-2014, 94 % of the people at least one year old living in 05472 were living in the same residence one year earlier.

Figure 5. Geographic Mobility of Residents of 05472 in 2010-2014



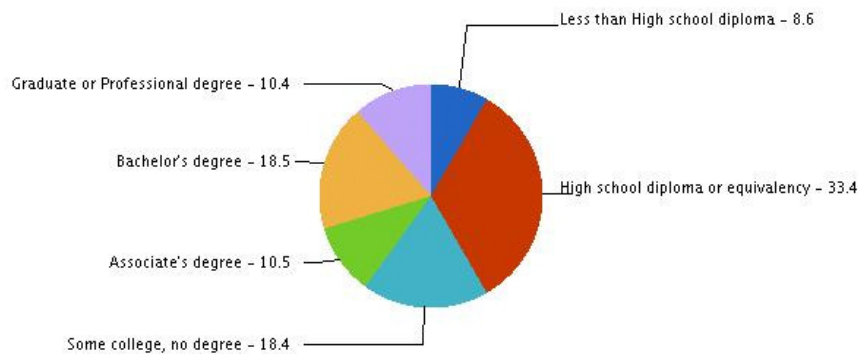
The geographic stability of New Haven's population is higher than the state average. Statewide, 87% of Vermonters were living in the same residence they were in the prior year.

Education

In 2010-2014, 91% of people 25 years and over had at least graduated from high school and 29% had a bachelor's degree or higher. An estimated 9% did not complete high school. *New Haven's education level is slightly lower than the statewide average. Across Vermont, 92% of people 25 years old and over have graduated high school, and 35% have a bachelor's degree or higher.*

The total school enrollment in 05472 was 300 in 2010-2014. Nursery school and kindergarten enrollment was 10 and elementary or high school enrollment was 204 children. College or graduate school enrollment was 86.

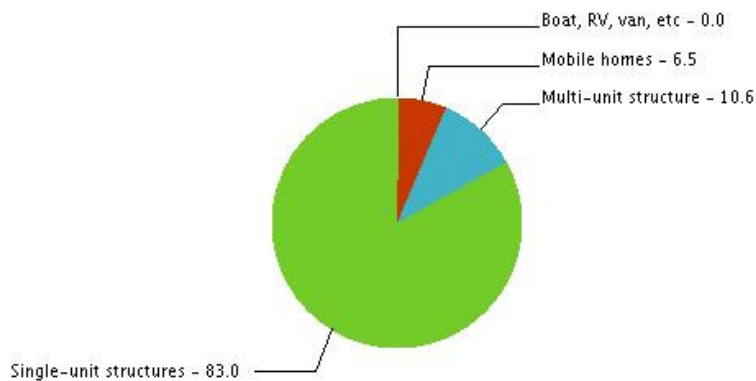
Figure 6. Educational Attainment 2010-2014



Housing Characteristics

In 2010-2014, 05472 had a total of 681 housing units, 4% of which were vacant. Of the total housing units, 83% were in single-unit structures, 11% were in multi-unit structures, and 6% were mobile homes. An estimated 37% of the housing units were built since 1990. *Statewide, 21% of housing units are vacant, and only 70% are single-unit structures.*

Figure 7. Types of Housing Units 2010-2014



The median number of rooms in all housing units in 05472 is 6. Of these housing units, 74% have three or more bedrooms.

Housing Costs

The median monthly housing costs for mortgaged owners in the New Haven area was \$1,769, non-mortgaged owners \$708, and renters \$1,013. An estimated 36% of owners with mortgages, 21% of owners without mortgages, and 54% of renters in 05472 spent 30% or more of household income on housing.

Statewide, median monthly housing costs for mortgaged owners was \$1,541, non-mortgaged owners \$636, and renters \$889. New Haven's housing costs are high compared to the state average.

The purchase price of housing in the New Haven area is also likely considerably in excess of statewide averages. Vermont Realtors do not disaggregate data by town for Vermont's rural areas. However, the Median Sales Price in August 2016 across Vermont was up to \$215,000 for single-family homes, while in Addison County the median sales price for a single-family home was \$242,000.

Local Economy and Economic Development

24 VSA §4382(a)(11)

New Haven residents support local economic development that allows families to live comfortably within the Town. In the planning process, many residents expressed an interest in exploring support for increased local small and home-based businesses. Looking forward to the next Town Plan, the Town will focus on bolstering its economic development plan with evidence-based options.

Agricultural Sector

New Haven's family farms and agriculture-related businesses contribute positively to the local and regional economy, define the community's character and express and preserve the Town's cultural heritage. The highly scenic, intact rural landscapes throughout New Haven contribute substantially to the quality of life in the Town and enhance local property values. New Haven's scenic landscapes also enhance the quality of life for state residents from surrounding

towns who regularly travel our roads -- particularly Route 7 and Route 17 -- and attract visitors and tourists from near and far.

Farming continues to dominate New Haven's landscape, and is becoming more diversified. Farming operations active in New Haven in addition to dairy include Christmas trees, poultry, fruit and vegetable, vineyards, horse stables, sheep, and a variety of small, diversified operations. New Haven's soil is good for agricultural use, and many fields are large enough to adapt well to modern agricultural practices.



Residents, visitors and tourists enjoy pick-your-own produce opportunities, riding lessons, entertainment events and wine tastings as part of New Haven's agricultural economy. A substantial portion of New Haven's retail and service businesses are related to and dependent on the agricultural sector and other farmland use, including cattle feed production, landscaping, sale of local food products, sale and maintenance of farm equipment, and hunting and fishing supplies. Notable among these is the

Addison County Fair and Field Days fairgrounds, which forms the heart of Addison County's enduring farming culture and economy, and serves as the site for agricultural related events such as horse shows throughout the year.

Agricultural Soils and Farmland. Total land area in New Haven is 26,576 acres, of which 7% (1,949 acres) is considered prime agricultural soil, 58% (15,381 acres) is classified by USDA as soils of statewide or local agricultural importance, and 35% (9,253 acres) is non-agricultural soil.

Prime soil types are well drained with high natural fertility: examples are Melrose, Nellis, Winooski and Hadley. Agricultural soils of statewide importance are usually wetter or stonier, but still considered good for most farming: examples are Covington, Vergennes clay, Livingston and Limerick. Terrain varies from low-lying wetland to ridge.

While agricultural soils are a critical component of New Haven's agricultural landscape and economy, the value of those soils is enhanced by the pattern of large, adjacent or contiguous farmlands, and the pattern of hedgerows, woodlots and forested tracts interspersed with those farmlands.

This pattern throughout the Town outside of designated pockets of development such as the Village Center or Junction supports economic viability for agriculture while also providing environmental and scenic benefits.

When fragmentation of land parcels occurs, it becomes difficult for farms to expand in the face of land values, which rise with increased non-farm development. Fragmentation of farmland -- cutting up of larger parcels and interspersing non-farm uses such as residential, commercial, industrial or utility development -- diminishes the farming options and economies of scale for future farmers, degrades the scenic and cultural heritage values of the landscape, and diminishes environmental values including grassland bird habitat.

To sustain agricultural use beyond this generation, the Town discourages or precludes development in areas with the best agricultural land and encourages the maintenance of larger parcels or contiguous adjacent farm parcels intact. The Town also encourages diversified agricultural and agriculture-related business uses of smaller parcels including farmstands and local food production.

New Haven's RA Zoning District regulations and subdivision are some of the implementation methods by which the Town precludes inappropriate fragmentation and development of agricultural lands. Density-based zoning tools also provide a means for permitting flexible development to maintain open land for farming, environmental protection and scenic viewsheds. Scenic viewshed protection, discussed below, also helps protect the Town's agricultural lands and the valuable aesthetic effects of open farmland.

Agricultural Operations. According to the 2007 Agricultural Census, there were 73 farms within the New Haven zip code (05472), 30 of which were the primary occupation of their operator (as of the writing of this plan data from the 2012 Agricultural Census was not available by zip code). This compares to 53 farms counted in the 1997 census, 38 of which were the primary occupation of their operator. Anecdotal evidence and the census data suggest that agriculture in New Haven is diversifying. Dairy farms are consolidating into fewer, larger operations, while many smaller non-dairy farms are being started in response to the growing consumer desire to purchase locally produced products and food.

While farming practices are primarily within the province of state regulation, the Town will encourage environmentally sound farming practices where appropriate and within the Town's authority.

Business Sectors

New Haven has experienced growth in the number of businesses and in the number of people employed within Town over the past two decades. The Vermont Department of Labor statistics (which include only those jobs "covered" by unemployment insurance and so likely under counts the total number of people working in Town by 25 to 30%) counted 641 jobs in New Haven in 2015, 568 of

which were in the private sector. There were 81 establishments employing people, including businesses engaged in construction, extractive industries, retail trade, and professional or business services.

Many New Haven businesses are interrelated with the farms and forests of the community. For example, Phoenix Feeds and Nutrition manufactures and distributes cattle feed to farms locally and across New England, while Stark Mountain woodworking often sources

wood locally for their custom cabinetry and furniture production. Firearms dealers and sporting good purveyors in the Town support local hunting and fishing.

The Vermont Secretary of State's office lists 183 registered business entities in the Town of New Haven. Of these, at least 60 are farms, food, and forest-product related businesses, including a winery, several equestrian centers, firewood cutting and timber transport.

NOTE REGARDING MAPS:

The base maps used in Figures 8, 25, 26, 27, and 28 of this Town Plan omit the Town Legal Trail as well as a portion of the North-South Highway evidenced by historical surveys of that roadway.

The Transportation and Facilities Map omits certain recreational resources such as the ball fields behind the Town Offices.

A map of potential energy generation facilities development sites has been created for the Town by the Addison County Regional Planning Commission, but it was not correlated to the Town's parcel map, and did not include layers related to utility constraints (GMP solar map red lines, and the three-phase power line map) or the Town's scenic and historic resources.

Over the next few years from the adoption of this Plan, the Town, through the Planning Commission, will work with Regional Planning and VTRANS to update the base maps; to produce maps affiliated with the upcoming scenic resources and town lands management planning; and to map potential energy facilities development sites that incorporate the Town's designated scenic, cultural and historic resources as well as utility constraints.

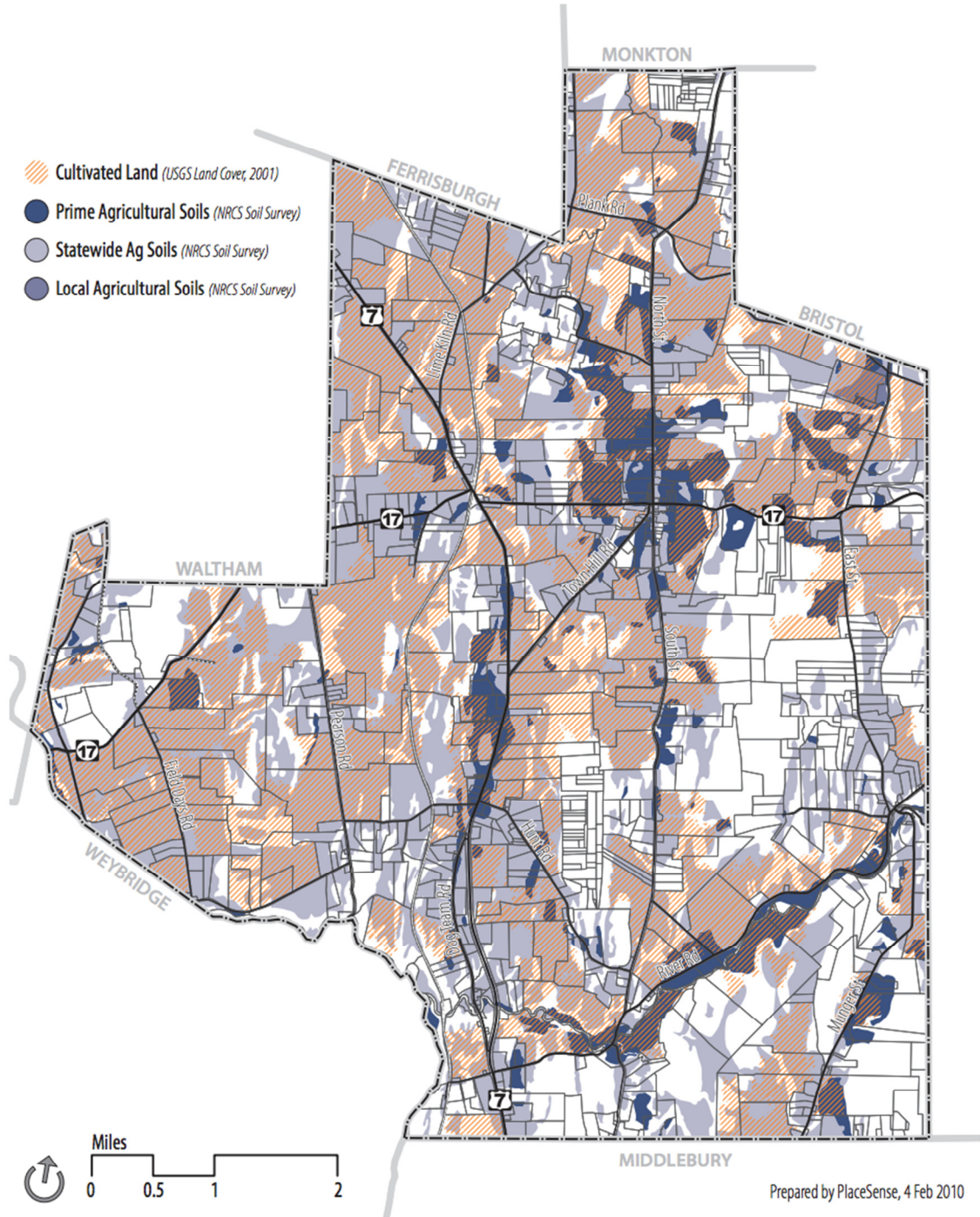


Figure 8. AGRICULTURAL SOILS MAP

Note: Base map omits the Town Trail and a small segment of the North South Highway; see VTRANS map for these elements, and Note Regarding Maps elsewhere in this Plan.

Employment Status and Type of Employer

In 05472, 72% of the population 16 and over were employed; 24% were not currently in the labor force. *Labor statistics for the New Haven area are significantly better than statewide, where 63% of the Vermont population 16 and over are employed in the same time period, and 33% are not currently in the labor force.*

An estimated 69% of the people employed were private wage and salary workers; 13% were federal, state, or local government workers; and 17% were self-employed in their own (not incorporated) business. *Significantly more people are self-employed in the New Haven area than the state average: 76% of Vermonters are wage workers, 15% work for government and only 9% are self-employed.*

Figure 9. Classes of workers

Class of worker	Number	%
Private wage and salary workers	665	69.4
Federal, state, or local government workers	120	12.5
Self-employed workers in own not incorporated business	164	17.1

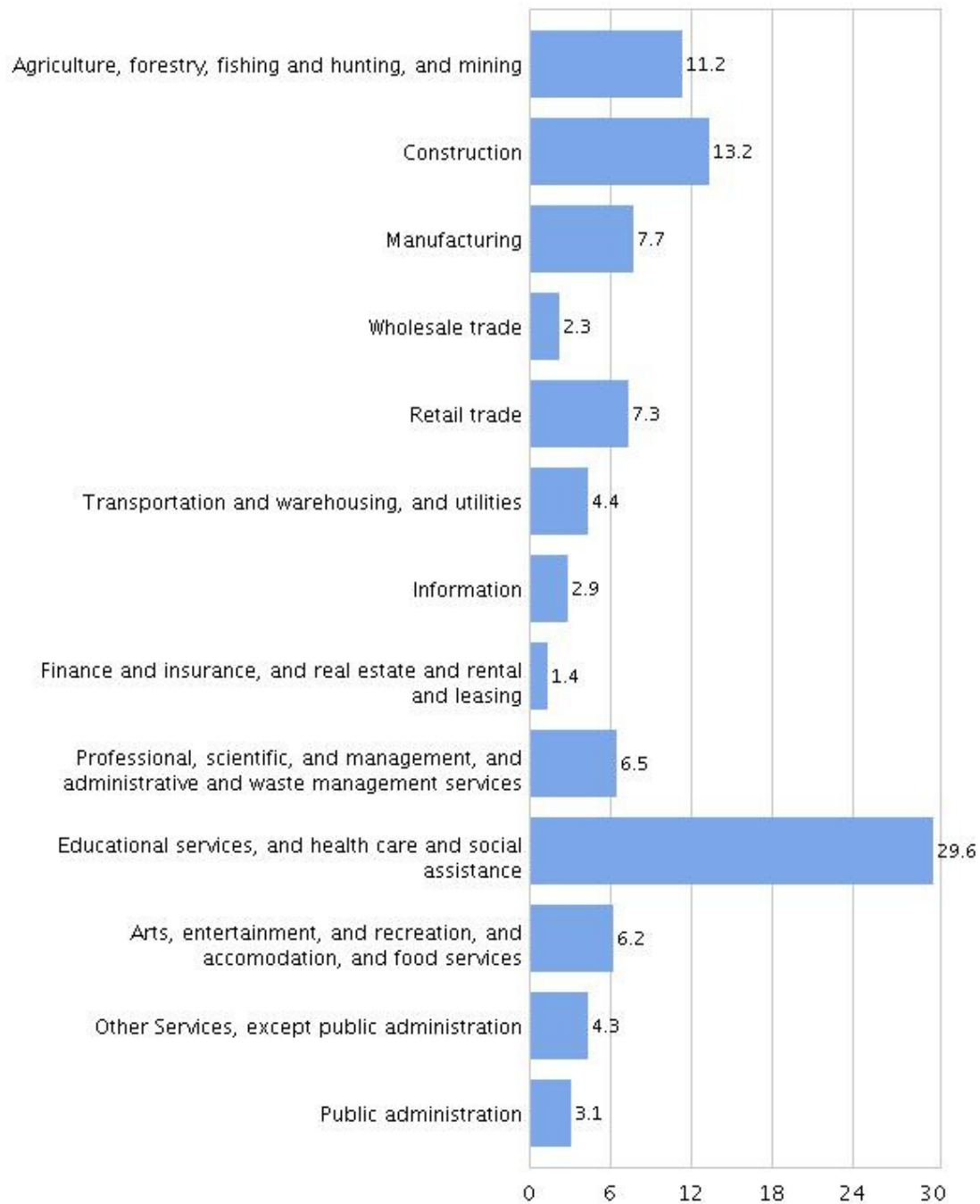
Industries

New Haven's employment industry profile varies significantly from the state averages, demonstrating the importance of agriculture and self-employment in the New Haven local economy. While statewide only 2.7% of Vermonters work in farming, 11.2% of New Haven employees aged 16 and older are employed in agriculture. Significantly more New Haven residents work in construction as well: 13.2% to the statewide 7.4%. However, New Haven residents have fewer manufacturing jobs: 7.7% to the statewide 10.7%.

New Haven residents have expressed an interest in supporting additional locally-based businesses and light, primarily land-based industry.

In 2010-2014, the civilian employed population 16 years and older in 05472 worked in the following industries:

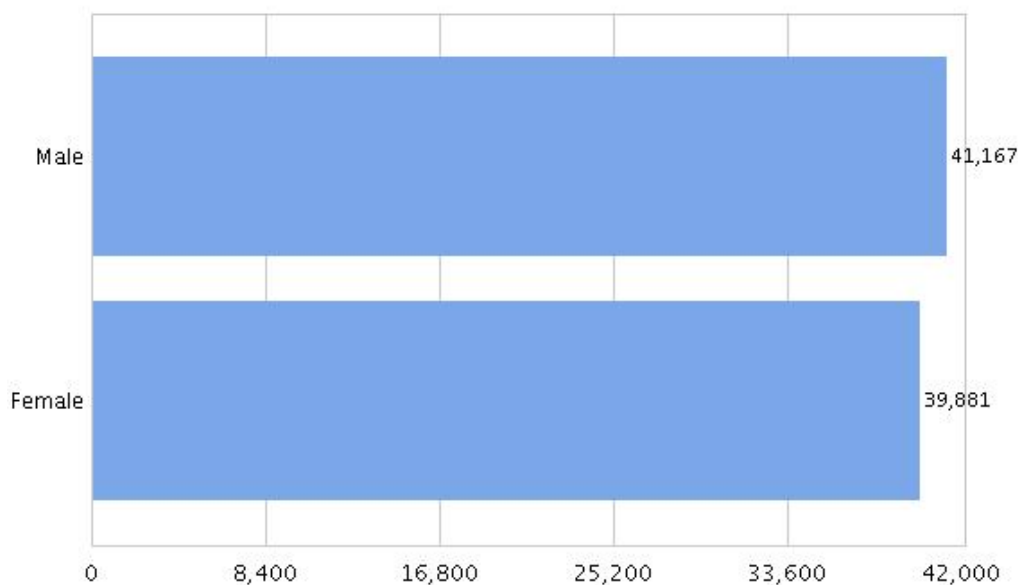
Figure 10. Employment % by Industry 2010-2014



Income

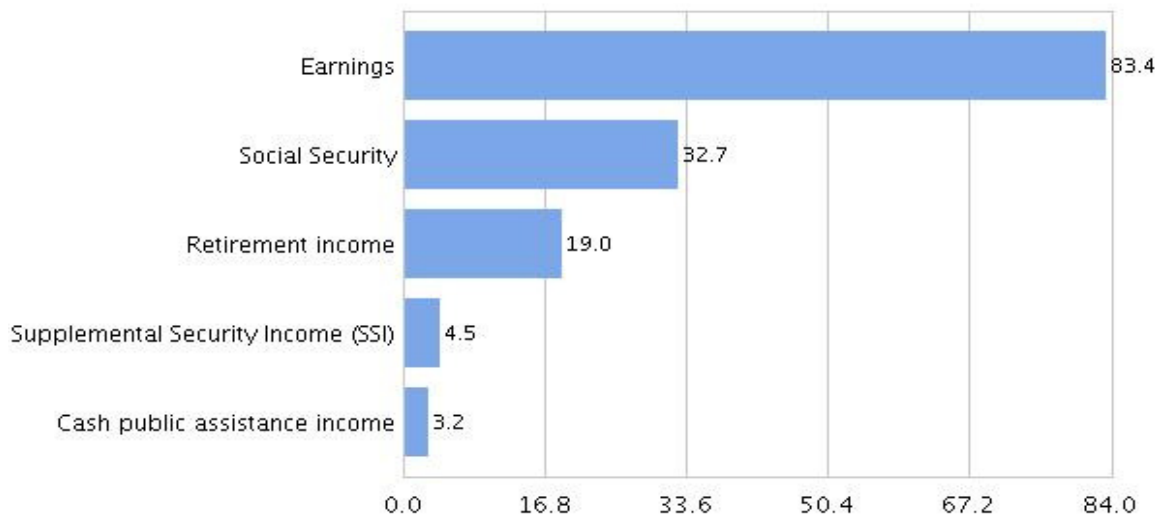
The median income of households in 05472 was \$69,792. An estimated 9% of households had income below \$15,000 a year and 8% had income over \$150,000 or more. *The median income of households in New Haven is far greater than the statewide average of \$54,447. Fewer New Haven households had income below \$15,000 than the statewide 11%, and the percentage of households with income over \$150,000 is exactly at the statewide average. In one particular income statistic, New Haven far outpaces the state as a whole: income equality between genders. Statewide, women make on average more than \$7,000 less than men do; in New Haven, that difference is about \$1200. However, this difference is due to women in New Haven making slightly more money than statewide, while New Haven men make about \$5000 less per year than their counterparts across the state. Four percent more New Haven households had earned income, however, and about 2% more received retirement income in addition to Social Security.*

Figure 11. Median Earnings for Full-Time Year-Round Workers by Sex in 2010-2014



An estimated 83% of the households received earnings and 19% received retirement income other than Social Security. An estimated 33% of the households received Social Security. The average income from Social Security was \$18,060. These income sources are not mutually exclusive; that is, some households received income from more than one source.

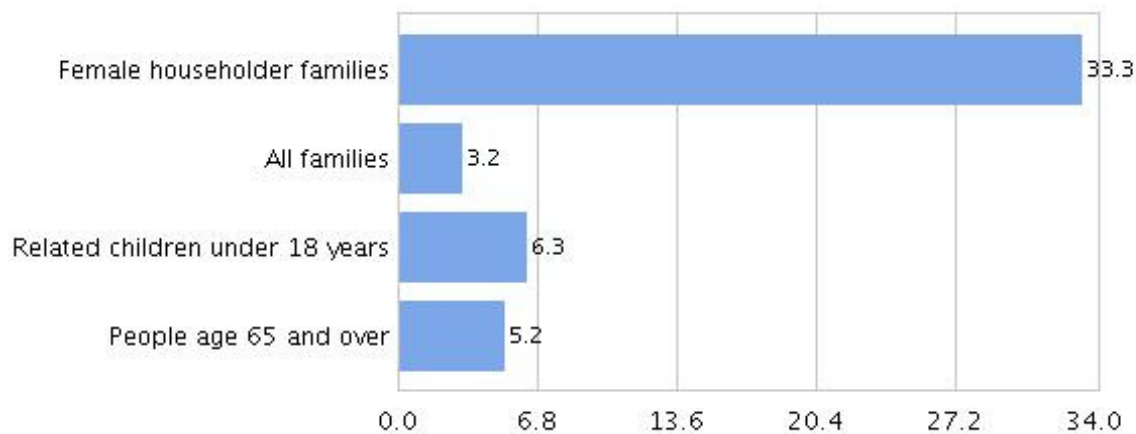
**Figure 12. Proportion of Households with Various Income Sources
2010-2014**



Poverty and Participation in Government Programs

In 2010-2014, 5% of people in New Haven were in poverty. An estimated 6% of related children under 18 were below the poverty level, compared with 5% of people 65 years old and over. An estimated 3 % of all families and 33% of families with a female householder and no husband present had incomes below the poverty level. *Statewide, 12% of Vermonters are in poverty in this same time period, including 15% of the children under 18 and 7% of the people 65 and older.*

Figure 13. Poverty Rates in 05472 in 2010-2014



Health Insurance

Among the civilian non-institutionalized population in 05472 in 2010-2014, 92% had health insurance coverage and 8% did not have health insurance coverage. For those under 18 years of age, 1% had no health insurance coverage. The civilian non-institutionalized population had both private and public health insurance, with 74% having private coverage and 32% having public coverage. *Despite the New Haven area's large self-employment rate, its health insurance coverage rates are equal to state averages, with a higher percentage of local residents having private health insurance coverage.*

Utility and Facilities Plan

24 VSA §4382(a)(4):

Town and Community Resources

	A	B	C	D	E	F	G
1	New Haven	Town Owned Properties		T A X	M A P		
2	Year	Name	From	Map ID	Parcel ID	Acres	Location
3	1844	West Cemetery was then "Burying Ground Society"	Stow	11	0652	0.89	Field Days Road
4	1972	next to road	Ouellette et al	1	0060	2.1	Plank Road
5	1955	pond (fire)	Holden, Geo & Pauline	5	0208	0.72	Main Street
6	2010	Municipal Bldg, north of	Sleeper, Linda	5	0221	3.01	North Street
7	2000	office	King, Irma	6	0222	0.5	North Street
8	1984	office	Tebbetts, Geraldine	6	0223	0.49	North Street
9	1980	shed (behind)	Larrow, Julius	5	0232		Main Street
10	1955	shed for equipment	Hopkins, Margaret	6	0232	1.9	Main Street
11	1987	Town Green	Congregational Church	5	0280	0.9	South & Main Streets
12	1987	Veterans Memorial & Parking	Congregational Church	5	0281		Town Hill & Main St.
13	2010	land	Johnson, Andrew	7	0390	3.4	N.of Otter Creek Hwy (VT.Rt.17)
14	1993	Town Hill Swamp	Otter Creek Acres	8	0476	5.4	East of US Route 7
15	1993	Town Hill Swamp	Otter Creek Acres	8	0528	7.4	East of US Route 7
16	1996	Mills, bet. River Rd & river	Tax Collector (O'Meara)	9	0552	0.2	River Road
17	2003	Riverside Cemetery Assoc.		9	0568	1.6	River Road
18	1973	River Park	DeMers, Leon & Carolyn	13	0714	5.1	River Road
19	1983	dugout, north of	Sumner, Philip & Lucille	13	0765	0.41	River Road
20	2000	Mills, between River Rd & the river	Addison County Community Trust	9		1.7	River Road

Figure 14: Town-Owned Lands

Town Lands

The Town of New Haven owns numerous parcels of land. Except for the Town Gravel Pit (located in Bristol), all are

located within Town boundaries. Town-owned parcels total approximately 27 acres and range in size from a 7.4 acre swamp lot in the Town Hill Swamp to a .2 acre gore lot off River Road.

The School has leased a piece of land for their septic system across from the Town Shed on Main Street, which is used by the School, and also serves the Town Offices and Town Hall.

The above table comprises an index of the lands presently owned by the Town of New Haven, together with a map indicating the general location of each parcel. This index is taken from a study of the New Haven Town Lands produced by Beverly Landon; the complete materials for this study are available at the Town Offices. All lands owned by the Town are owned for public purposes. Prior to the expiration of this Town Plan, the Town shall develop a management plan for all Town-owned lands to insure that appropriate management practices are applied to each of these public assets.

Structures

Town. The Town owns three major structures: the Town Hall, the Town Community Center and the Town Shed complex.

The Town Hall, on North Street, houses the school cafeteria on the ground floor and a combination gymnasium and meeting space on the second floor.

The Town Sheds/Fire Department, off Main Street, consists of a large, fully-enclosed garage which is divided into separate spaces for the Road Department

and the Fire Department, as well as a separate, three-sided, multi-bay shed to house additional road equipment and supplies. In 2004, in preparation for new federal and state regulations affecting water quality, a large structure was constructed next to the shed to cover the salted sand pile.

In 2000, the Town purchased the property immediately north of the Town Hall for future use of the structure and/or land. A new Town Community Center, opened June 29, 2010, was constructed in 2009 on property that was previously purchased in 2000, located directly north of the Town Hall. This new building houses the Town offices and the New Haven Community Library. This building contains meeting space and the new Town vault. In 2010, Town voters approved the purchase of land adjacent to the Community Center for future Town needs.



Town Office and Library Constructed June 2009

School. The Beeman Elementary School building and three parcels of land were conveyed to the Town in 1984 from Beeman Academy. This property is subject to trusts and conditions; parcel

number three is subject to a decree of the Addison Superior Court issued 23 April 1984 stipulating that the property be used only for educational purposes and uses related and incidental to the same. The school is maintained by the Town on property received from the Beeman Trustees. This allows for the use of the school building on the property for as long as the Town uses it to house the school. The Town has shown continuing commitment to this building in past decades, with major expenditures for a new septic system and extensive renovations. Federal- and state-mandated space requirements for each child are increasing which may affect the school in the future.

As a member of the Addison Northeast Supervisory Union District, New Haven is served in the secondary grades (7-12) by the Mount Abraham Union High School, located in Bristol.

On November 8, 2016, the five towns approved the recommendation of the Act 46 Unification Committee and will move forward to begin the consolidation process based on the Articles of Agreement approved by voters.

Libraries. The New Haven Community Library is housed in the New Haven Community Center. Beeman Elementary School maintains its own school library in the school building. The Community Library provides access to print, audio-visual, on-line collections, the internet, inter-library loans, and wi-fi free of charge to all Town residents. It also offers

programs for lifelong learning, including a book discussion group, story-hour, and others on a variety of topics.

Other Community Resources

Religious Institutions. Within the Town of New Haven are four church buildings. The Congregational Church of New Haven, Vermont, Inc. is located south of the Village Green at 91 Town Hill Road in the center of Town. The Union Church of New Haven Mills is located in a historic church building on East Street. The Mills church is used seasonally, for services and social events, in the summer months. The Addison County Church of Christ is located at 145 Campground Road. The Town's newest church, the New Haven United Reform Church at 1660 Ethan Allen Highway north of the New Haven River, was built in 1999.

Post Office. The New Haven Post Office is located at 73 Main Street, in New Haven Junction. The Town supports this local post office, which is convenient not only to New Haven residents and businesses, but also to travelers and commuters along the Route 7 corridor. Like many rural post offices, this facility is privately owned and leased to the US Postal Service.

Fire House. The New Haven fire station is owned by the Town, and located at 1839 Main Street.

State Police Barracks. The New Haven State Police Barracks at 2490 Ethan Allen Highway includes a meeting room that can be used by community organizations.

Recreation

The Town is served by a Park Committee that is responsible for oversight of the Town Green and Demers Park on River Road. The Town Green contains picnic tables, benches and a gazebo (with electric power). Demers Park provides residents with river access, a rudimentary picnic area and a softball field. A part time Events Coordinator is responsible for scheduling use of the Town Hall and other town resources.



Beeman Playground

The elementary school grounds and the area behind the Community Center include several play structures, an outdoor basketball court and a soccer/baseball field. These are often used by Townspeople during non-school hours, and allow for the existence of a Town-sponsored Little League. The Town Hall is also host to many extra-curricular activities, including fund-raising events for local organizations, meeting space and informal basketball play.

New Haven has one legal trail, which connects Route 17 near the Addison

County Field Days site with Pearson Road. It runs generally east-west. The western half of the Legal Trail has been maintained very well by the Dubois Brothers of Addison. It is passable with a standard motor vehicle. Access to the old cemetery is via this route. The eastern half has not been maintained and is currently not passable by vehicles.

The trail is open to pedestrian, bicycle and equestrian use, and to snowmobiles when snow cover allows. The views from the midpoint, which is an elevated section, are quite beautiful and encompass the rolling hills around the scenic Field Days valley (described more specifically in the Scenic Viewsheds section), providing a popular spot for picnics.

New Haven's many small dirt roads, with their generally slow traffic and many scenic views, provide ample opportunity for recreational walking, running and horseback riding. The Town maintains sidewalks in a limited portion of the Village Center and adjacent Municipal District, allowing safer pedestrian passage between the Town Green, adjacent community store, the Beeman School, playground, ball fields, and the Town Offices and Library.

Hunting and fishing also play an important role in the recreational, cultural and economic environment of the Town. The Town has an ordinance precluding firearms discharge in the Village District. Hunting is otherwise

common throughout the Town on unposted open lands. Hunters in Vermont must first complete a hunter safety course prior to obtaining seasonal hunting licenses. Information on course availability can be obtained from the Vermont Department of Fish and Wildlife. http://www.vtfishandwildlife.com/hunt/hunter_education

The New Haven River is a crown jewel of Vermont trout fisheries. Originating on Breadloaf Mountain in Ripton, the river descends steeply through Lincoln and Bristol. The grade levels out through New Haven, where it is joined by Notch Brook and the Muddy Branch. Fishing conditions are quite diverse, including pockets, riffles, log jams, slow meanders and deep pools. The “Dog Team” section of the river between Route 7 and the Otter Creek is heavily stocked, features strong hatches, and has a series of waterfalls making this a popular area to fish. The New Haven River Anglers Association is a local nonprofit organization providing information and events regarding local fishing. <http://www.nhraa.com/>

Public Utilities and Services

As of 2016, the Town provides no Town-owned utilities. Town-provided services are limited to recycling, schools, road maintenance, library and support for emergency services.

Wastewater. Septic disposal is the responsibility of individual landowners. In support of our Village Center, New

Haven would consider proposals for privately maintained shared water and septic systems.

During the past decade, changes to Vermont law require all new lots and buildings, and certain additions to existing structures, to obtain a state septic permit. At the same time, the state is allowing for an ever-increasing number of septic technologies. As a result, the Town can no longer rely on state regulations to limit growth, and subdivision of smaller lots should be anticipated.

Water Supply. Most residences in Town are serviced by private water supplies in the form of deep-drilled wells. Some community members utilize springs as their water source. The school is served by a well.

The “Town Well” located at the junction of Main Street and Town Hill Road is accessed by the fire department, but provides an insufficient water supply for fire fighting. Water supply for fire fighting purposes is drawn from surface water, ponds and streams. For the past 15 years, the fire department with assistance from state and federal grants has installed dry hydrants at the most commonly used water supply locations. These dry hydrants allow for a more dependable access to water sources year-round. Increased residential and commercial growth in the future will increase the need for water to fight fires, while increased electrical generation facilities in the Town increases fire risk and hazards to firefighters.

Emergency Services. Fire coverage within the Town is provided by the independent New Haven Volunteer Fire Department, Inc., which provides for additional expanded capacity through a mutual aid agreement with other county fire departments. The Town and the Fire Department have a Memorandum of Understanding setting out the Town's support for the Department. The Report of the Fire Marshall indicated that the department responded to 114 calls and members attended 1,082 hours of training in 2014. The Fire Department includes a First Response unit, which obtains emergency medical service (EMS) transport support from Vergennes, Middlebury or Bristol. Law enforcement is provided by the Vermont State Police. The Addison County Sheriff provides routine traffic enforcement under contract to the Town.

New Haven is committed to reducing known hazards through mitigation of those hazards through cost effective solutions. The Town has adopted an all-hazards mitigation plan, which identifies known hazards and proposes projects that will mitigate some of the effects of those hazards on the Town's residents.

Health Services. While New Haven residents have access to a variety of healthcare services and providers in the neighboring Towns of Middlebury, Vergennes and Bristol, the Town is part of a five-Town area that was designated by the U.S. Department of Health and Human Services in 2009 as medically underserved. A local organization,

Mountain Health Center and Dentistry, was formed to improve access to health and dental care in the area and provide primary care with an emphasis on preventive services and management of chronic disease. The Open Door clinic, a facility in Middlebury providing free medical care for uninsured and under-insured adults, is also accessible to New Haven residents. Improved access to healthcare services is increasingly important in light of the higher percentages of older residents currently living in Town and expected to be living here in future years. Addison County Home Health and Hospice is based in New Haven and is one of the Town's largest employers.

Solid Waste. The Town provides for residents' solid waste disposal through association with the Addison County Solid Waste District. The district maintains a transfer station in Middlebury for the waste created by member Towns. The Town itself provides a recycling drop-off location for its residents and pays for this service. Residents may also contract with private waste haulers for garbage removal and recycling.

Utilities. New Haven residents are within the Green Mountain Power electric service area. Energy generation and transmission facilities are described in the Energy Plan, below. The town is served by several telephone, cable and internet service companies. Landline phone service is provided by Fairpoint or Waitsfield Champlain Valley Telecom.

Internet/television cable service in the town is limited; some areas of the town require dish or DSL service. Cell service is excellent throughout portions of the Town, but is lacking in some areas including the western side of the town. Free wi-fi service is available at the Town Library.

Siting, screening and performance standards applicable to all utility/§248 projects in New Haven are located within the Energy Plan component, below.

Education Facilities Plan

24 VSA §4382(a)(6)

The Town of New Haven has a long history of strong support for its public schools. The present location and structure of Beeman Elementary school dates from the era when all public education for New Haven residents was conducted within one centrally located building, which contained Beeman Academy (9-12) and the New Haven Graded School. In the late 1960s New Haven became a member of the Mount Abraham Union High School District (grades 7-12). The Beeman building, which had formerly housed 12 grades, was then converted into an elementary facility.

In the late 1990s, Townspeople met significant challenges including the addition of a new septic system located on leased land across from the Town Sheds, a complete interior renovation, new siding and storm windows.

Transportation for the school is

contracted through a private bussing company. Students throughout New Haven are bussed from home to Beeman Elementary School where busses are consolidated and high school students are transported on to Mount Abe in Bristol. In the afternoon, the process is reversed.

In fall 2014, the Beeman Elementary School population consisted of 91 students. Enrollment peaked in the mid-1990s at more than 170 students. In 2016 a school district consolidation vote was passed, and the school unification process will continue over the next several years.

Technical and vocational training is available to New Haven students at the Hannaford Career Center in Middlebury.

New Haven supports availability of local child care. The Town is receptive to child care proposals as home occupations and or conditional uses for larger facilities. According to the Department of Children

and Families, there were three registered child care providers and two licensed day

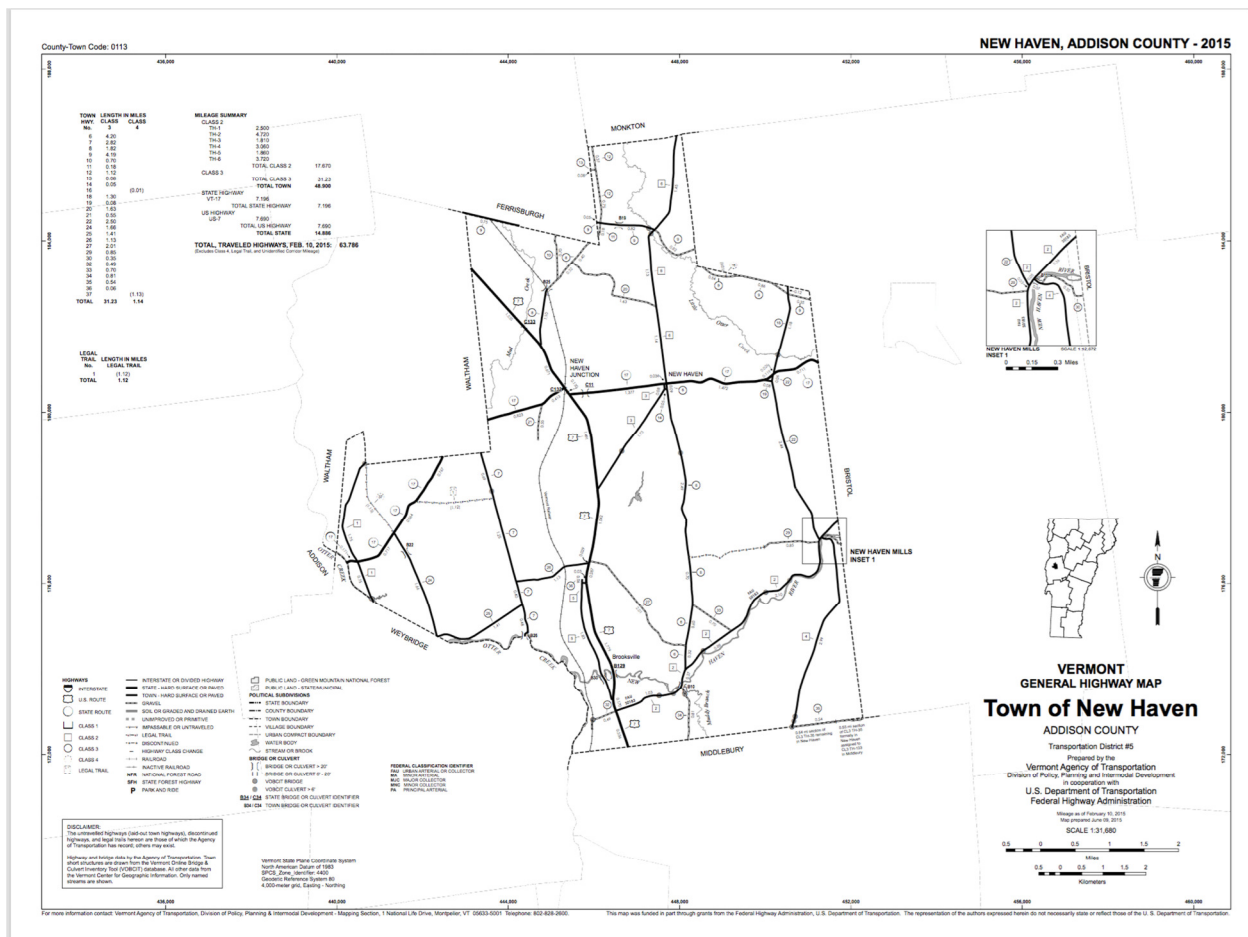
care centers in New Haven in 2015.

Transportation

24 VSA §4382(a)(3)

The Town of New Haven currently contains the following transportation resources:

- 7.7 miles of federal highway (Route 7)
- 7.2 miles of state highway (Route 17)
- 17.67 miles of Class 2 town highways
- 31.23 miles of Class 3 town highways
- 1.14 miles of Class 4 town highways
- 1.12 miles of legal trails
- 7.4 miles of private roads
- 7.5 miles of state-owned railroad bed with 2 sidings



Vehicular Transportation

State Highways. Two state-maintained highways travel through New Haven: Route 7, the major north-south highway in western Vermont; and Route 17, an east-west highway that travels from the state line at Lake Champlain over the Green Mountains to its junction with Route 100 in Waitsfield. The two highways cross at New Haven Junction and Route 17 passes through the village center. Traffic levels on Route 7 have increased only modestly over the past two decades, while traffic on Route 17 has grown more significantly.

Town Highways. It is the Town's policy to maintain all Town-owned Class 2 and 3 Highways on a year-round basis. New Haven maintains nearly 50 miles of public road, 36 of which are paved and 14 of which are gravel. Due to the high cost of road maintenance, the Town actively discourages any increase in the total mileage of Town-maintained roads. The Town also desires to limit new curb cuts in order to minimize the safety problems, which additional access points may cause.

Because the paving of gravel roads affects the Town's rural character and raises concerns of cost, safety and future maintenance, any new paving of existing

gravel roads should be undertaken only after reasonable review of those concerns. New paving, in any case, should be preceded by upgrading of the roadbed to standards, which will match anticipated increases in weight, speed and traffic.

Under Vermont's Act 178 of 2006, certain abandoned highways, known as "unidentified corridors," were automatically discontinued as of July 1, 2015. Going forward, the Town shall ensure that any remaining public roads, rights-of-way or trails still in existence are preserved for uses such as hiking, horseback riding and snowmobiling, unless there is a compelling reason for their discontinuance.

Act 64, the Vermont Clean Water Act of 2015 adopted by the Vermont legislature to protect Vermont's surface water and meet federal Environmental Protection Agency requirements for diminishing the impaired status of Vermont's waterways, charged the Vermont Department of Environmental Conservation with developing a general permit that will be applicable to all municipal roads. Under this new system, municipalities will need to inventory their hydrologically-connected roads and bring their roads and drainage systems up to Municipal Roads General Permit (MRGP) standards to protect water quality. Over the next few years, New Haven will be engaged in this inventory process, and required

upgrades will be reflected in the Town's roads budget.

Private Roads. It is likely that any new roads built in Town in the future will be private. The Town requires private roads accessing development to meet state recommended standards for their projected traffic load, and may require additional conditions through the subdivision, PUD or Conditional Use process. This protects future residents served by the private road, and reduces the potential need for the Town to take responsibility for failed private infrastructure. Current E-911 standards require naming and numbering of all new roads that access more than two residences. All new private roads and private driveways shall be constructed in a manner that allows safe access by emergency service vehicles.

Figure 16. Traffic Counts

	1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012
Route 7													
Middlebury Line to River Rd	8,730	8,450	8,860	8,680	9,000	8,200	9,700	10,200	10,000	10,100	9,200	9,900	10,000
River Rd to Dog Team Rd	7,030	7,205	7,530	7,650	7,900	6,500	7,700	8,000	8,100	8,200	7,700	8,300	8,400
Dog Team Rd to Dog Team Rd	7,030	6,720	7,050	7,060	6,900	7,900	7,900	8,100	8,000	8,200	7,600	7,900	8,200
Dog Team Rd to Town Hill Rd	7,170	6,970	7,225	7,335	7,600	8,000	8,000	8,100	8,100	8,100	7,900	8,100	8,700
Town Hill Rd to Rte. 17 E	6,430	5,900	6,165	6,260	6,500	6,800	6,800	6,900	6,900	6,900	6,600	6,600	6,800
Rte. 17 E to Rte. 17 W	7,010	6,695	6,995	7,105	7,300	8,300	8,500	8,500	8,800	8,700	8,100	8,300	8,200
Rte. 17 W to Waltham Line	6,660	6,350	7,660	6,720	6,900	7,500	7,900	7,800	7,900	7,800	7,300	7,800	7,700
Route 17													
Weybridge Line to Waltham Line	920	780	765	780	940	960	1,400	1,200	1,200	1,000	1,100	1,100	1,100
Waltham Line to Rte. 7	830	1,020	1,000	1,020	1,100	1,200	1,500	1,300	1,400	1,300	1,300	1,400	1,300
Rte. 7 to Town Hill Rd	1,600	2,290	2,245	2,290	2,500	2,500	2,600	2,800	2,800	2,700	2,900	2,800	2,500
Town Hill Rd to North St	2,130	3,335	3,270	3,335	3,300	3,200	3,300	3,900	3,900	3,800	3,800	3,700	4,100
North St to Bristol Line	2,040	3,200	3,135	3,140	3,200	3,000	3,100	3,900	4,000	3,800	3,600	3,600	4,000

Source: VTTrans AADT's

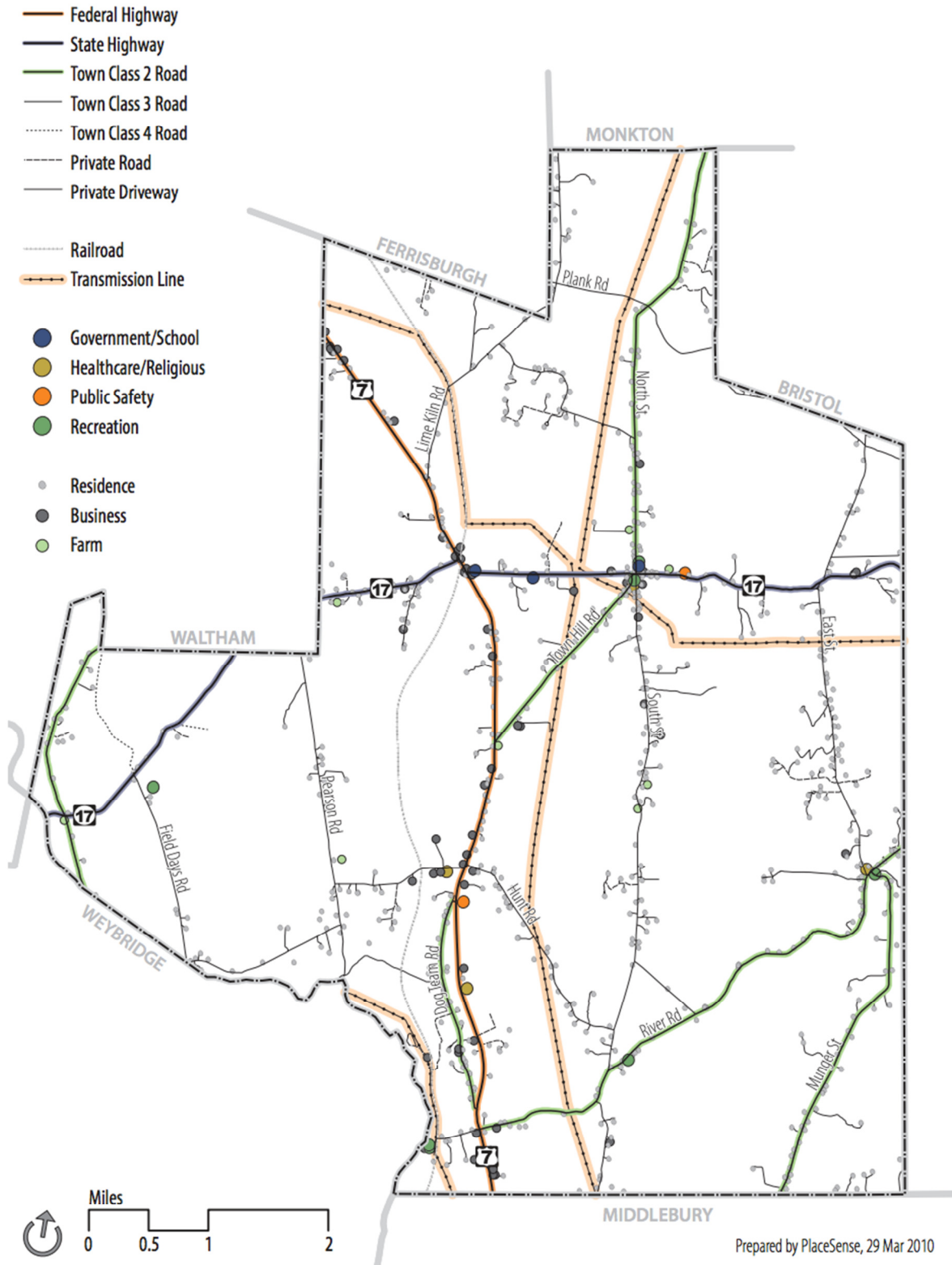


Figure 17. TRANSPORTATION AND FACILITIES MAP

Note: Base map omits the Town Trail and a small segment of the North South Highway; see VTRANS map for these elements, and Note Regarding Maps elsewhere in this Plan.

Rail Transportation

Vermont Railway services the Town of New Haven on state-owned tracks. This service is limited to a single 7.5-mile line with 2 siding facilities, one at New Haven Junction and the other at the Pike Industries Plant on Campground Road. There currently is no passenger service on this line, although the infrastructure for a station still exists in the Junction.

The Town supports the continued use of the existing rail system in Town and recognizes the importance of both rail bed and sidings in its operation. The Town encourages the state to ensure that all rail-highway junctures be appropriately marked and maintained to limit their dangers, while retaining the current system of ground-level crossings.

Air Transportation

The Town allows privately owned and maintained airstrips for individual, non-commercial use, where such use does not have an adverse impact on the surrounding land use.

Public Transportation

Public transportation is provided in the Town by Addison County Transit Resources (ACTR) which offers scheduled service between Middlebury, Bristol and Vergennes (the “Tri Town Bus” route), with frequent stops at the Community Center, as well as ride sharing services and subsidized rides for the elderly and disabled. ACTR and the Chittenden County Transit Authority (CCTA) provide bus service to Burlington.

The Town promotes and encourages the use of public transportation by supporting routes provided by CCTA and carpooling. The Town has installed and maintains a park-and-ride at the Town Offices in the Village Center. In the public process for this Town Plan, some residents noted that the CCTA commuter schedule to Burlington only serves limited needs. The Town will participate in and encourage increased public transportation options -- including bus and rail -- as such opportunities arise.

Bicycle Travel, Walking and Horseback Riding

Bicycling is a popular activity in New Haven, particularly on the Town’s scenic back roads. This activity provides health benefits and energy savings to New Haven’s residents, and also provides an opportunity to attract tourists and visitors to the Town. The Town will promote and encourage bicycling and bicycle safety by working with federal, state and private funding sources to make our roads safer and more bicycle-friendly whenever such opportunities arise.

Walking and horseback riding are also common on New Haven’s roads. These are addressed in the Recreation section of this Town Plan.

Transportation and Energy

Energy analysis of transportation is included in the Energy Plan section of this Town Plan.



Energy Plan

24 VSA §4382(a)(9) and 24 V.S.A. § 4348a(a)(3)

Vermont state energy law and policy, particularly regarding non-utility power generation, changed significantly in the ten years prior to the writing of this 2017 New Haven Town plan. A series of legislative enactments, followed by regulatory changes at the Public Service Board, created a rapidly shifting legal landscape for New Haven and other towns attempting to respond to non-utility generator and merchant facilities development.

These changes in law follow in the wake of frenzied advances in energy technology: the industry of solar, wind, methane and biomass generation as well as merchant transmission facilities for fuels and electricity has emerged at a pace and force that was unanticipated as recently as a decade ago. Rapid change gives rise to new issues and conflicts, including how to fit distributed

generation into a power grid that was not designed for it, and how to secure our energy future without degrading important elements of Vermont culture and environment like wetlands, forest, wildlife habitat, prime agricultural soils, and the visual and cultural landscape valued by residents and critical to the tourist economy.

Utility projects like electric generation and transmission facilities and gas pipelines are regulated by the state of Vermont pursuant to 30 VSA §248. The state pre-emption statute indicates that towns cannot apply municipal land use regulation to §248 utility projects. However, the nature of §248 projects, and the mandates and authorizations of state statutes, have been changing so swiftly that many significant legal questions regarding the role of municipalities in review of these projects have yet to be

ruled on by the Vermont Supreme Court. Statutes and regulations have been changing annually, but interpretation of how those statutes and regulations will work has not yet caught up.

New Haven is the site of a hyper-abundance of energy projects and utility infrastructure, described in more detail below. Town residents have repeatedly expressed their fervent desire to minimize or preclude the negative impact of both utility infrastructure and non-utility generation facilities (particularly of a commercial scale -- the Town consistently supports its residents' rights to install alternative energy such as solar or wind to offset their own residential or home and farm business energy needs) on the Town's scenic landscape, agricultural soils and economy. In response, the Town has actively engaged in specific project review proceedings at the Public Service Board and at the Vermont Supreme Court. The Town has also participated in hearings, workshops

and comment sessions on utility regulations and statutes at the Public Service Board and Vermont Legislature.

The Town's efforts have had a positive, substantive impact both in terms of mitigating adverse effects of projects within the Town, and in creating regulatory processes that are more appropriate and accessible to municipalities and project neighbors. No other town in the state has taken as active a role in the ongoing public dialogue about energy generation siting and the ability of municipalities and project neighbors to participate meaningfully in Public Service Board processes.

Legislation adopted over the past several years authorize municipalities to adopt solar development screening bylaws, and to address §248 project issues in Town Plans in such a way as to warrant greater consideration and deference by the Public Service Board.

Act 56, adopted in June 2015:

- mandated statutory minimum setbacks for solar electric generation facilities, as an amendment to 30 VSA §248(s). The statute states that the Public Service Board *may* require setbacks greater than those mandated.
- authorized municipalities to adopt solar screening requirements as a 'municipal bylaw... under 24 VSA Section 4414(15)' or by a 'municipal ordinance...under 24 VSA Section 2291(28)'.
- added 30 V.S.A. §248(a)(4)(F) to read: (F) The legislative body and the planning commission for the municipality in which a facility is located shall have the right to appear as a party in any proceedings held under this subsection.

Act 174, adopted in June 2016:

- authorized municipalities to submit their plans to the Regional Planning Commission or, for a limited time, to the Commissioner of the Department of Public Service, for a determination of energy compliance.
- expanded the right of municipal legislative bodies and planning commissions to participate in the Public Service Board proceedings for projects in adjoining towns if the distance of the facility's nearest component to the boundary of that adjacent municipality is 500 feet or 10 times the height of the facility's tallest component, whichever is greater.
- required developers of projects greater than 15kW to record a notice of the certificate or amended certificate, on a form prescribed by the Board, in the land records of each municipality in which a facility subject to the certificate is located and shall submit proof of this recording to the Board.
- required ground-mounted solar electric generation facilities to comply with the screening requirements of a municipal bylaw adopted under 24 V.S.A. § 4414(15) or a municipal ordinance adopted under 24 V.S.A. § 2291(28), and the recommendation of a municipality applying such a bylaw or ordinance, unless the Board finds that requiring such compliance would prohibit or have the effect of prohibiting the installation of such a facility or have the effect of interfering with the facility's intended functional use.
- mandated that the Public Service Board **shall give substantial deference to the land conservation measures and specific policies contained in a duly adopted regional and municipal plan that has received an affirmative determination of energy compliance under 24 V.S.A. § 4352. "Substantial deference" means that a land conservation measure or specific policy shall be applied in accordance with its terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure or policy.**

Additionally, the state Municipal Development Plan statute, 24 VSA §4382, requires that Town Plans contain the following energy element:

(9) An energy plan, including an analysis of energy resources, needs, scarcities, costs and problems within the municipality, a statement of policy on the conservation of energy, including programs, such as thermal integrity standards for buildings, to implement that policy, a statement of policy on the development of renewable energy resources, a statement of policy on patterns and densities of land use likely to result in conservation of energy.

This Energy Plan section of the New Haven Town Plan comprises the energy plan required by 24 VSA §4382(a)(9), the energy element required by 24 VSA §4348a(a)(3), and the Town's Enhanced Energy Planning under 24 VSA §4352 (b) and (c). It also establishes the parameters of the Solar and Commercial Development Screening Bylaw to be adopted within the Town's zoning bylaws.

Upon adoption of this Town Plan, the Town shall seek to have it certified by the Regional Planning Commission or the Commissioner of Public Service for an affirmative determination of energy compliance.

At the time of writing and adoption of this Town Plan, receiving a determination of energy compliance requires that the Town Plan contain and be deemed consistent with the following statutory provisions:

24 V.S.A. § 4348a(a)(3): An energy element, which may include an analysis of energy resources, needs, scarcities, costs, and problems within the region, across all energy sectors, including electric, thermal, and transportation; a statement of policy on the conservation and efficient use of energy and the development and siting of renewable energy resources, and; a statement of policy on patterns and densities of land use and control devices likely to result in conservation of energy; and an identification of potential areas for the development and siting of renewable energy resources and areas that are unsuitable for siting those resources or particular categories or sizes of those resources.

24 V.S.A. §4352(c) Enhanced energy planning; requirements. To obtain an affirmative determination of energy compliance under this section, a plan must:

...

(2) in the case of a municipal plan, include an energy element that has the same components as described in subdivision 4348a(a)(3) of this title for a regional plan and be confirmed under section 4350 of this title;

(3) be consistent with the following, with consistency determined in the manner described under subdivision 4302(f)(1) of this title:

(A) Vermont's greenhouse gas reduction goals under 10 V.S.A. §578(a);

(B) Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. §580;

(C) Vermont's building efficiency goals under 10 V.S.A. § 581;

(D) State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans); and

(E) the distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005; and

(4) meet the standards for issuing a determination of energy compliance included in the State energy plans.

Energy Infrastructure, Facilities and Service

Historically most of New Haven's energy needs were met locally. Forests provided fuel for heat; the New Haven River and Otter Creek were dammed to power mills and later electrical generation facilities; humans, horses and oxen provided transportation and moved farm and logging equipment. Kerosene and whale oil lamps relied on imported fuels, while the railroad brought mechanized transportation. The advent of electric light and the internal combustion engine around the turn of the 20th century transformed the use of energy in New Haven, and throughout the state, country and world.

Fossil fuel production and consumption is subject to global market forces and disruptions; it presently produces cost-effective fuel for transportation, heat, and industry, but also produces negative environmental impacts. Petroleum prices are down to modest levels at the time of writing this Town Plan, but have fluctuated widely over the last decade and may be expected to do so again in the foreseeable future. As a result, there is heightened interest nationally and statewide in the development of solar, wind and other low-emission, renewable energy resources and more fuel efficient and alternative fuel vehicles. New Haven has met and exceeded its fair share of contribution to statewide renewable energy goals and is host to a diverse array of renewable energy resources.

New Haven can continue to contribute to a positive energy outlook that supports our local economy, cultural, scenic, historic and environmental resources, by taking steps to:

- ◆ Promote energy conservation and increased energy efficiency, e.g., through building energy audits, weatherization and equipment replacement;
- ◆ Encourage or require lot layouts and building siting, design and construction techniques that maximize access to onsite renewable energy resources and incorporate emerging technologies;
- ◆ Seeking to ensure that our local electric distribution lines maintain sufficient available capacity for distributed generation that serves local residents with on-site electric use, or that supports the local agricultural and forestry economy with biomass and biomethane generation; and
- ◆ Encourage energy-conscious land development patterns -- particularly clustered village centers and a vibrant local economy including home occupations, home businesses, and small local businesses that serve the community while minimizing commuting -- and provide safe and

convenient alternatives to automobile travel for local trips.

New Haven is located within the electric distribution service territory of Green Mountain Power, a utility company owned by Gaz Metro of Canada. Green Mountain Power owns and maintains the distribution lines within the Town, and also owns the hydroelectric facility at Belden Falls in New Haven. A 40-year license for this certified low-impact hydro plant was issued by FERC in 2014 allowing GMP to double this facility's output.

Regional power transmission lines and substations are located within the Town, owned and operated by VELCO.

As of the writing of this Town Plan, a merchant power transmission project is proposed by Vermont Green Line Devco. This high voltage DC line would transmit power from upstate New York and Canada via a cable under Lake Champlain to the VELCO substation in New Haven. A large converter station proposed for construction would convert the DC power to AC for insertion into the VELCO regional distribution grid. This project is for New England regional transmission only; no power from the project will serve local distribution lines or customers. The Town has negotiated an agreement with the project aimed at mitigating potential impacts relative to noise, aesthetics, property values and economic benefits.

As of the writing of this Town Plan, Vermont Gas -- another subsidiary of Gaz

Metro -- is in the process of constructing a natural gas pipeline that would transmit gas through the Town, and also develop local distribution lines that would serve a small portion of New Haven near the Town Offices, School and Village Center. The Town has been an active participant in the Public Service Board review process and has negotiated a Memorandum of Agreement with VGS to reduce adverse impacts of the project and ensure that a portion of the Town will have access to natural gas distribution service.

Within New Haven are a rapidly escalating number of non-utility distributed electrical generation facilities, all of which have been constructed within the last few years. These vary in size from the 2.2MW Cross Pollination solar facility on Route 7 approved by the Public Service Board in 2011, to several ground-mounted group net metering arrays, to many dozens of residential rooftop solar panels generating a few kilowatts of power used primarily on site. The list of

applications and project proposals is too fluid to describe accurately, but in the several years preceding the writing of this 2017 Town Plan, has included at least one additional 2.2MW facility occupying over 20 acres of farmland, and well over a dozen ground-mounted group net metering project proposals, several located on prime agricultural soils or on wetlands. Several of these have been constructed; others are undergoing PSB review or Vermont Supreme Court appeal.

As a result of this profusion of distributed electric generation within the Town, Green Mountain Power has designated most of the distribution circuits serving the Town as “Poor” (red) on their online Solar Map, indicating that these circuits are at or exceeding capacity. As of the writing of this Town Plan, only a small portion of the easterly side of New Haven has available capacity on its distribution lines, according to GMP.

Background: New Haven’s Experience with Utility and Non-Utility Energy Projects

In 2009, VELCO completed a major upgrade to its transmission infrastructure within the Town, including the addition of a 345 kV line and construction of a much larger substation off Route 17 west of the Village Center. Green Mountain Power has installed lines connecting to the VELCO

infrastructure.

The VELCO upgrade project was strongly opposed by many New Haven residents. The Town participated in the Public Service Board process, opposing the VELCO upgrade and vigorously arguing that the lines within the Town should be buried to diminish the significant negative aesthetic impact of the project. The PSB did not rule in the Town’s favor, and the massive power line today creates

a garish contrast with New Haven's stunning visual landscape, particularly from certain views on Route 7 and as they cross Main Street (Route 17) just west of the Village Center. It is likely that further expansion within the VELCO transmission corridor from New Haven to Williston will be proposed at a future time.

In 2011, the PSB issued its approval for the construction of the 2.2MW Cross Pollination facility on Route 7 in New Haven. This was one of the first solar electric generation facilities constructed in the State. The Town accepted its role as host to this -- at that time -- unique and innovative energy development, but advocated strongly for substantive aesthetic mitigation to minimize the visual impact on project neighbors and travelers on Route 7. The Town worked closely with Addison County Regional Planning to improve on the project's proposed siting and screening designs. While the project was constructed employing some of these mitigation measures, such as siting the project further from the roadway than originally planned, and housing the inverters in small structures that appear to be barns or sugar shacks, as of this writing the landscaping screening has not been completely installed. The plantings that have been done have failed to thrive and are not currently serving the intended function.

Within a few years after the Cross Pollination project construction, Vermont adopted economic and regulatory incentives for solar development,

particularly net-metered projects, and New Haven was inundated with notices for proposed solar development. Unlike the long and engaging review process for Cross Pollination, the legislature had put solar development on a fast track. While many of these notices were for roof-top residential solar projects that did not cause public concern, the Town also received a rapidly increasing number of applications for ground mounted net-metered solar arrays covering more than an acre of land, and then for a Standard Offer project covering over 20 acres of farmland. The Town through the Planning Commission, and then the Selectboard, scrambled to find effective ways to participate in the PSB process for the new facilities.

Most of the ground-mounted net metering projects in Town serve customers outside of New Haven; most sell their renewable energy credits, and thus can not legally be deemed renewable energy.

While Townspeople recognize the necessity of utility infrastructure, it is evident that the Town is bearing a disproportionate share of the adverse impacts of utility development (overloaded distribution lines and substation infrastructure, degradation of nearby property values through inserting industrial facilities in residential zones, diminishment of cultural, environment and scenic resources including aesthetics and loss of open lands and farmlands, impact on wildlife habitat and critical agricultural economy, and potential impacts on the future of land use planning

and development patterns) designed primarily to serve development outside the Town, and in many cases outside the county or State. It is the Town's objective to ensure that all reasonable measures are taken to mitigate any further adverse impacts on the Town from utility and non-utility energy facilities, including

generation, transmission and distribution infrastructure, particularly with respect to protecting the high quality of the Town's scenic character.

24 V.S.A. § 4348a(a)(3): Analysis Of Energy Resources, Needs, Scarcities, Costs, And Problems Within The Region, Across All Energy Sectors, Including Electric, Thermal, And Transportation

A. Electric

New Haven is rich in electric energy resources. Hydropower from the Belden Dam, and power from the Cross Pollination solar photovoltaic plant, together with numerous rooftop and ground mounted solar arrays, already produce far more power within the Town than is consumed within the Town.

New Haven's electricity needs, according to the Community Energy Dashboard, is 5,277,600kWh per year: 7200kWh year average Vermont household X 733 household units in New Haven (assuming 100% occupancy).

The Belden Falls hydropower facility produces 9,600,000kWh/year, and is slated for a substantial production expansion. This one facility alone produces nearly twice New Haven's electric consumption.

Four properties in New Haven generate power from wind, producing 36,724kWh per year.

New Haven is ranked second in the state for the quantity of ground-mounted solar electric generation facilities. There are 33 ground-mounted solar sites in New Haven, producing 5,620,134kWh/year -- also in excess of New Haven's electrical needs.

As of the writing of this Town Plan, 35 New Haven residents also have roof-mounted solar electric generation equipment, producing 301,714kWh of power per year.

TOWN ELECTRIC NEEDS: 5,277,600kWh

TOWN ELECTRIC GENERATION: 15,558,572kWh

The issue of scarcity and need for New Haven in regards to electricity is inverted: The challenge faced by the Town is that distributed generation has saturated local distribution lines. The primary need of the Town in terms of electricity is to strive to ensure that electric

power remains safe and of high quality for Town residents and businesses, without experiencing line-flicker, over-voltages or power outages due to overloaded equipment. An additional need of the Town is to strive to ensure that sufficient capacity remains on local distribution lines to continue to allow Town residents and businesses to install generation capacity that will strictly be used on-site, as well as generation capacity of a type that supports the local agricultural economy such as methane digester facilities.

Safeguarding the ability of local residents to install electric generation for on-site use will help reduce electric bill costs. The Town will also continue to encourage weatherization and other cost-savings measures by distributing information about available programs to Town residents and collaborating, when appropriate, with our utility or local nonprofit organizations in other steps to promote energy conservation.

Further electric bill savings will be possible as GMP completes its plan to replace existing electric meters with digital wireless “smart meters” through its smart grid program, GMPCnects. When GMPCnects is up and running it will use fiber optic cable and digital technology to relay information back and forth between individual customers, Green Mountain Power, and electric grid components – including information about equipment performance, electric demand and use.

B. Thermal

Vermont has no native petroleum resources, and relies on external sources for transportation and most home-heating fuel supplies. Several local fuel oil dealers and propane dealers serve the New Haven area.

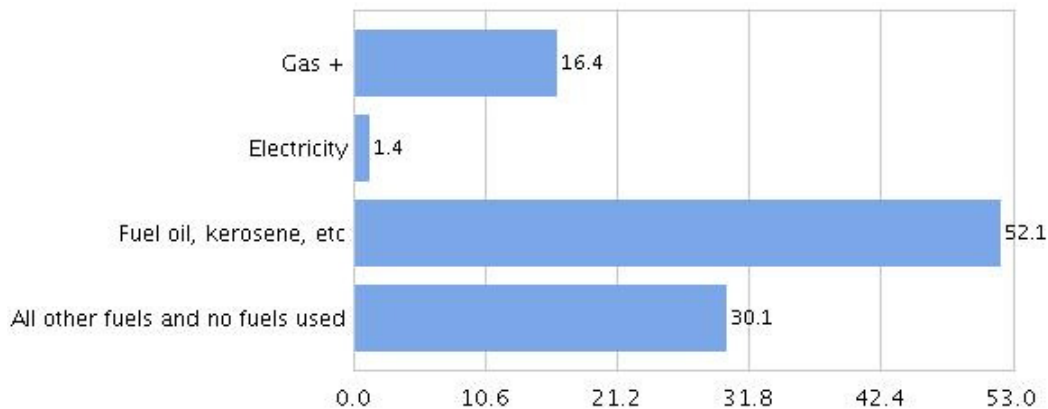
The Vermont Gas pipeline under construction is slated to provide the option of natural gas service to a portion of the Town.

In addition to oil and gas, New Haven residents rely on a variety of heating sources, including wood pellets, wood stoves, exterior wood boilers and furnaces, passive solar or underground construction, and geothermal. The New Haven Town Offices are providing leadership to the community by utilizing geothermal heat.

Statewide, far more homes heat with gas than they do in the New Haven area -- 31% to New Haven's 16.4%. Assuming the Vermont Gas pipeline completes construction and installs the anticipated distribution line in New Haven's Village Center area. New Haven may move closer to the state average. More New Haven area residents heat with fuel oil than the state average -- 52.1% to the statewide 45.6%. However, over 30% of New Haven residents heat with other fuels -- primarily wood and wood pellets as well as heat pumps and geothermal, compared to the statewide average of 18.7%. This indicates that within the thermal sector, New Haven has

exceeded the 25X25 program goal to have 25% of the State's energy use come from locally-produced farm and forest resources.

Figure 18. House heating fuel 2010-2014



+this category includes utility, bottled, tank, or LP gas

As with electricity, New Haven residents and businesses do not tend to experience scarcity of heating resources, though cost can create obstacles for some residents. Weatherization and fuel assistance programs help seniors and low-income residents in New Haven to meet their heating needs.

Efficiency Vermont. Created by the PSB in 1999, Efficiency Vermont is the first statewide energy efficiency utility in the nation. Energy conservation programs are financed by the state's electric utilities through an energy efficiency charge that is passed on to ratepayers. Current programs available to New Haven residents and businesses include:

- ◆ Efficient Products—energy efficient product information and discount coupons.
- ◆ Vermont Energy Star ® Homes Program—technical assistance and rebates to homebuilders and buyers who build energy efficient homes.
- ◆ Commercial Energy Opportunities—technical and financial assistance to commercial and industrial businesses to improve the efficiency of existing and new facilities.
- ◆ Dairy Farm Program—technical assistance, financial incentives and low-interest financing for energy efficient farm equipment.

- ◆ Residential Energy Efficiency Program (REEP)—technical and financial assistance to developers, owners and managers of low income multi-family housing to reduce energy costs.

- ◆ Income-Eligible Services—technical and financial assistance to low-income Vermonters who are participating in the state’s weatherization program to make additional electricity-saving improvements.

- ◆ Emerging Market Initiatives Program—identifies, evaluates and tests innovative energy efficiency technologies and practices to promote their use.

Energy Assistance Programs. Rising energy costs are a particular burden for individuals, households and homeowners with limited or fixed incomes. A number of energy assistance programs are available to income-eligible households; most are administered through the Champlain Valley Office of Economic Opportunity (CVOEO) in partnership with state and federal agencies and area utilities. These include, but may not be limited to:

- ◆ Fuel and utility assistance programs—to help pay for seasonal and emergency heating fuel supplies and electrical service. Heating programs rely heavily on federal Low Income Home Energy Assistance Program (LIHEAP) appropriations. Emergency funds are also available through state-funded general assistance programs.

- ◆ WARMTH program—a statewide program that raises emergency funds through individual donations to assist households through direct payments to fuel suppliers and electric utilities.

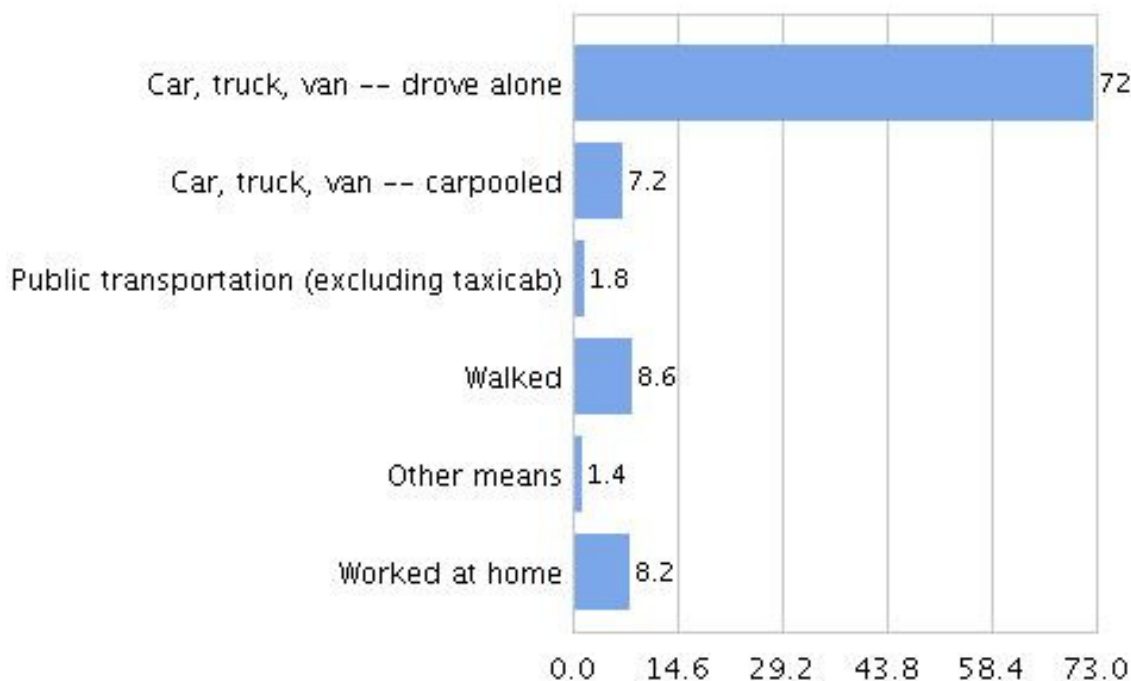
- ◆ Weatherization assistance programs—available to owners or renters (with landlord participation) including free energy audits, free lighting and appliance upgrades, and renovation services. These programs are funded through federal weatherization programs, the state’s weatherization trust fund, and utility assistance programs. Federal funding for both fuel assistance programs and the community action agencies that administer these programs is at risk under current federal budget proposals. State and local government may be called on in the very near future to fill funding gaps, or to find other innovative ways to address the energy needs of local households.

C. Transportation

The US Bureau of Transportation Statistics reports that the number of registered vehicles in Vermont rose by 6% while the total miles driven by Vermonters increased 16.6% from 1998 to 2007. Light trucks (pick-ups, vans and sport utility vehicles), with lower fuel efficiency than most automobiles, now comprise a larger percentage of vehicles on the road. This suggests that our aggregate fuel efficiency is decreasing, leading to increased transport fuel consumption and fuel emissions. Travel between home and work accounts for a significant portion of local transportation energy consumption—a characteristic of most rural communities in the United States.

Commuting to Work. An estimated 73% of 05472 workers drove to work alone in 2010-2014, and 7% carpooled. The average commute time was 25 minutes. *These figures for the New Haven area are close to the state average, though New Haven can strive to improve its carpooling: Across Vermont, 75% of workers drive to work alone, 10% carpool, and the average commute is 22 minutes. Slightly more New Haven residents take public transportation than the state average: 1.8% to 1.2%.*

Figure 19. Percent of Workers 16 and over Commuting by Mode 2010-2014



Limited transportation alternatives exist that would allow New Haven residents to become less dependent on motor vehicles to get around. Since most of the Town's energy use is related to transportation fuel consumption, every effort should be made locally to promote

ride sharing, alternative modes of transportation, and less auto-oriented patterns of development.

The primary strategy of the Town of New Haven in regard to transportation energy savings is that of economic development encouraging farm, home occupation, and home businesses, as well as small locally-sourced and locally-serving business, thus minimizing commuting trips as well as trips for services and goods outside of the Town. The ACTR bus loop between New Haven and its three surrounding larger towns, Bristol, Vergennes and Middlebury, ensure that shopping, medical care, and services not available in the Town are available via a public transportation ride a short distance to a nearby community.

The Town will explore the potential for incorporating bike lanes in future road upgrades and participation in the Safe Routes to Schools program.

The Town has developed and maintains a park-and-ride facility centrally located at the Town Offices, adjacent to the community school and library. Efforts to bolster a local rideshare and volunteer driver program could help provide rides and facilitate carpooling for destinations within and beyond the Town. Go Vermont, administered through the Vermont Agency of Transportation, provides state and local information on car-pooling, ride sharing, van-pooling, and special public transportation needs. Elderly Services provides bus transportation for elders and persons with special needs including rides to medical appointments and their vibrant day facility in Middlebury.

24 V.S.A. § 4348a(A)(3): Statement Of Policy On The Conservation And Efficient Use Of Energy And The Development And Siting Of Renewable Energy Resources

It is the policy of the Town of New Haven to support conservation and efficient use of energy across energy sectors including transportation, heat and electricity. The Town has set a leadership example in constructing its Town Offices and library adjacent to the school and near the Village Center, helping to create a walkable village and minimizing car trips; and further by siting and maintaining a park-n-ride at the Town Offices. The Town Offices and library use geothermal heating and high-efficiency lighting, among other efficient energy use techniques. The Town encourages conservation and efficient use of energy in the Town through information sharing regarding weatherization and other programs available to residents, and will expand this role through support of public transportation, ride sharing for commuters, and energy-aware land development review.

It is the policy of the Town of New Haven to acknowledge State statutory and Comprehensive Energy Plan goals regarding the development and siting of renewable energy resources. Additional electrical generation development in the Town is significantly constrained by utility infrastructure limitations and environmental factors, and the Town has already far exceeded distributed electric generation goals. Accordingly, this Town Plan emphasizes conservation across energy sectors, and anticipates that any future electric resource development will offset on-site usage by residents and local businesses within the Town of New Haven, while contributing positively to the quality of life, natural, historic and cultural resources, scenic views and economy of the Town, including geothermal, roof-mounted solar photovoltaic, passive solar construction, wood heat, and manure methane digesters.

24 V.S.A. § 4348a(A)(3): Statement Of Policy On Patterns And Densities Of Land Use And Control Devices Likely To Result In Conservation Of Energy

It is the policy of the Town of New Haven to support patterns and densities of land use and control devices likely to result in conservation of energy. More specifically, the Town, and this Town Plan's land use section, encourages compact, mixed-use development centers, which reduces energy use and allows for more efficient access to public transportation, and further encourages home occupations and home businesses, which reduce or eliminate commuting trips and ensure that products and services are available to the community from local sources. This Town Plan shall adopt density-based zoning in the next zoning bylaw revision.

Targeting economic and residential growth within areas intended for more concentrated development allows people to walk to their destinations, and makes public transit services between growth centers more economically feasible.

At the site level, a south facing building orientation and landscaping can effectively reduce energy demand. Clustering, and other energy efficient development patterns can be encouraged and/or required through local zoning and subdivision regulations.

24 V.S.A. § 4348a(A)(3): Identification Of Potential Areas For The Development And Siting Of Renewable Energy Resources And Areas That Are Unsuitable For Siting Those Resources Or Particular Categories Or Sizes Of Those Resources

New Haven is already the site of more than its allotted proportion of renewable energy resource development in the region. State statutes regarding renewable energy development are addressed primarily to communities that do not yet have such resources. New Haven therefore identifies as areas for development and siting of renewable resources those areas that have already been so developed, for the time period of the respective CPGs for those projects (which exceed the effective time parameters for this Town Plan).

To insure quality of electrical distribution services, and to insure that sufficient capacity remains on distribution lines to serve the on-site needs of New Haven's residents and businesses, distribution circuits designated as 'red' or 'yellow' by Green Mountain Power's Solar Map within the Town are unsuitable for additional distributed generation resource development. No electrical generation facilities shall be constructed on these red or yellow distribution circuits other than those producing electricity exclusively for on-site use. Similarly, single-phase distribution lines are unsuitable for distributed generation development other than for on-site use.

Existing Electricity Generation Resources

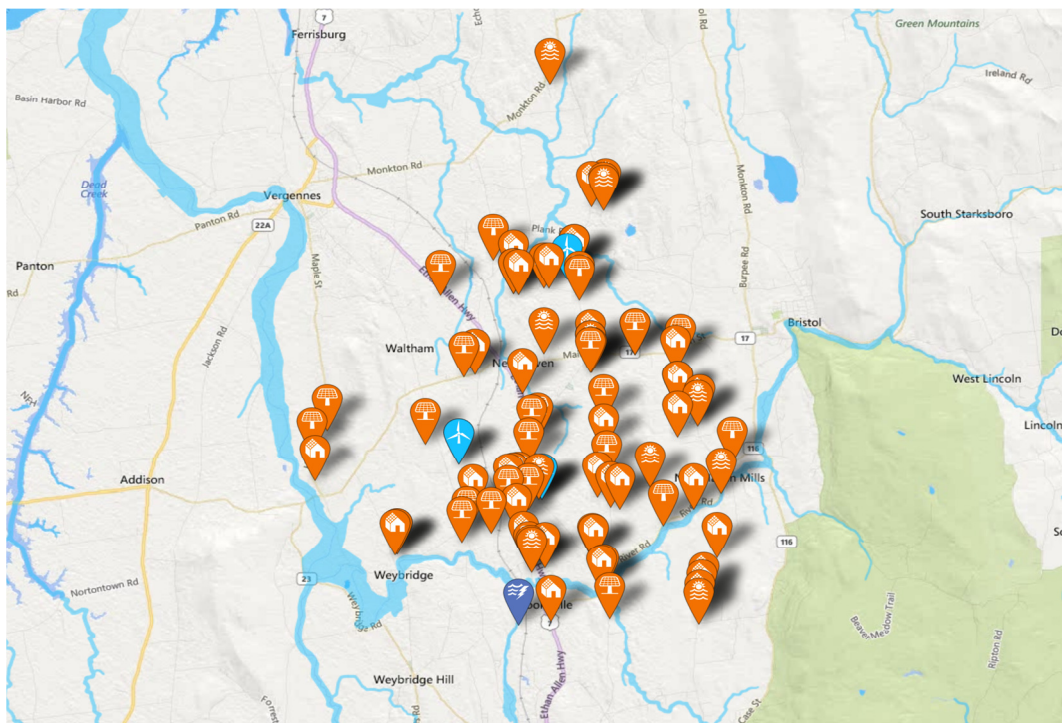


Figure 20. Locations of distributed generation resources in the Town of New Haven, November 2016. *Source: Community Energy Dashboard.*

Utility Infrastructure Constraints

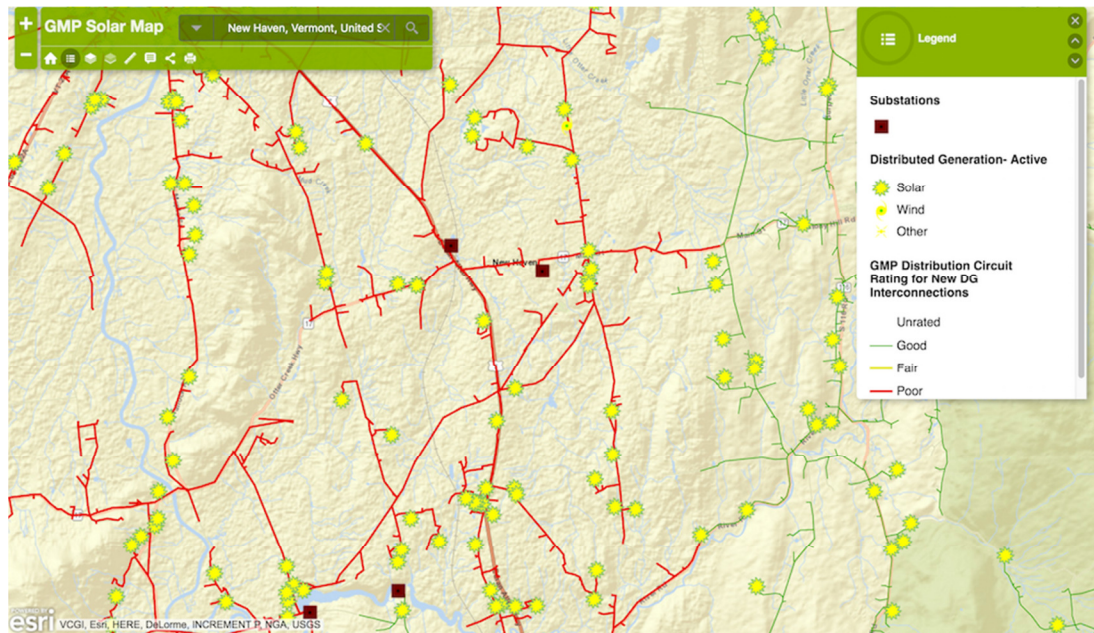


Figure 21. Green Mountain Power's Solar Map for New Haven, Vermont, November 2016.
Most of the Town is on poor, i.e. highly constrained or over loaded, distribution lines. Source: GMP

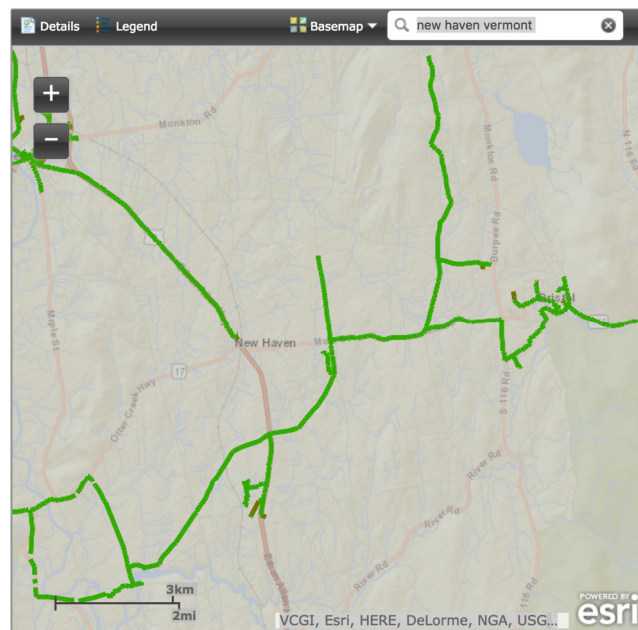


Figure 22. Availability of three phase power lines, New Haven. Source: GMP.

Environmental Constraints

New Haven residents have expressed concern about siting of distributed electrical generation facilities in locations that provide other highly valuable environmental assets, including climate change resiliency afforded by farm and forest blocks.

It is the policy of the Town of New Haven that distributed generation development, other than for on-site use, shall not occur on prime agricultural soils, or on agricultural soils of statewide significance absent mitigation as described elsewhere in this plan. Those soil designations may be found on the agricultural soils map in this Town Plan.

It is the policy of the Town of New Haven that distributed generation development, other than for on-site use, shall not occur on hydric soils. Those soil designations may be found on the wetlands and floodplains map in this Town Plan.

It is further the policy of the Town of New Haven that distributed generation development, other than for on-site use, shall not occur in the additional known and possible environmental constraint areas as indicated on these two maps below.

Additionally it is the policy of the Town of New Haven that distributed generation development, other than for on-site use, shall not compromise the Town's historic, cultural and scenic resources, as set out more specifically elsewhere in this Town Plan. Distributed generation resources for on-site use in designated scenic resource areas or affecting historic resources shall be for on-site use only AND shall be installed with sufficient aesthetic mitigation (including siting and landscaping) to preclude negative impact on these resources.

Distributed generation development shall not occur in front yards; nor within any area designated as a front, side or rear yard setback under New Haven zoning regulations, including the additional setbacks where two divergent zones meet.

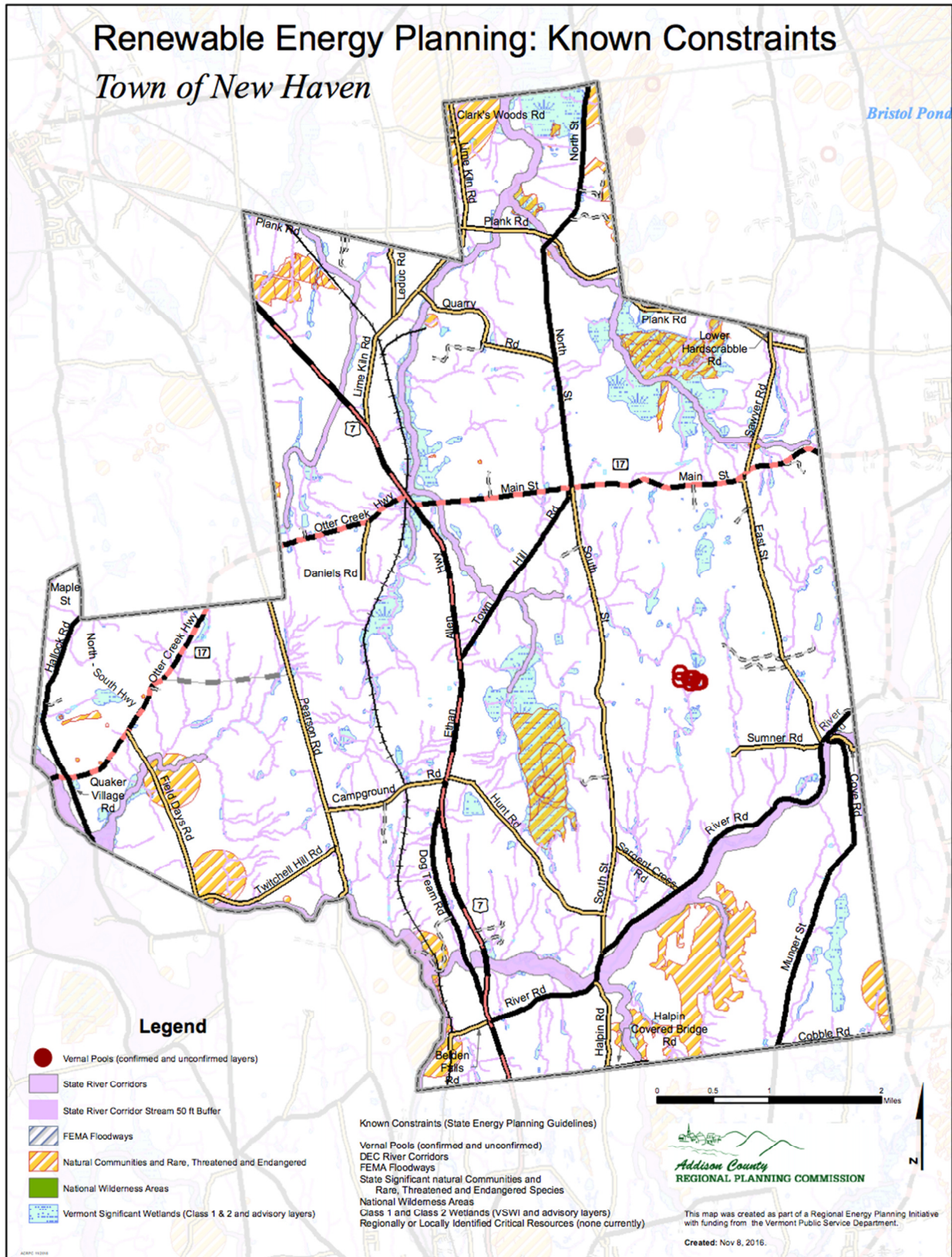


FIGURE 23. Known Environmental Constraints

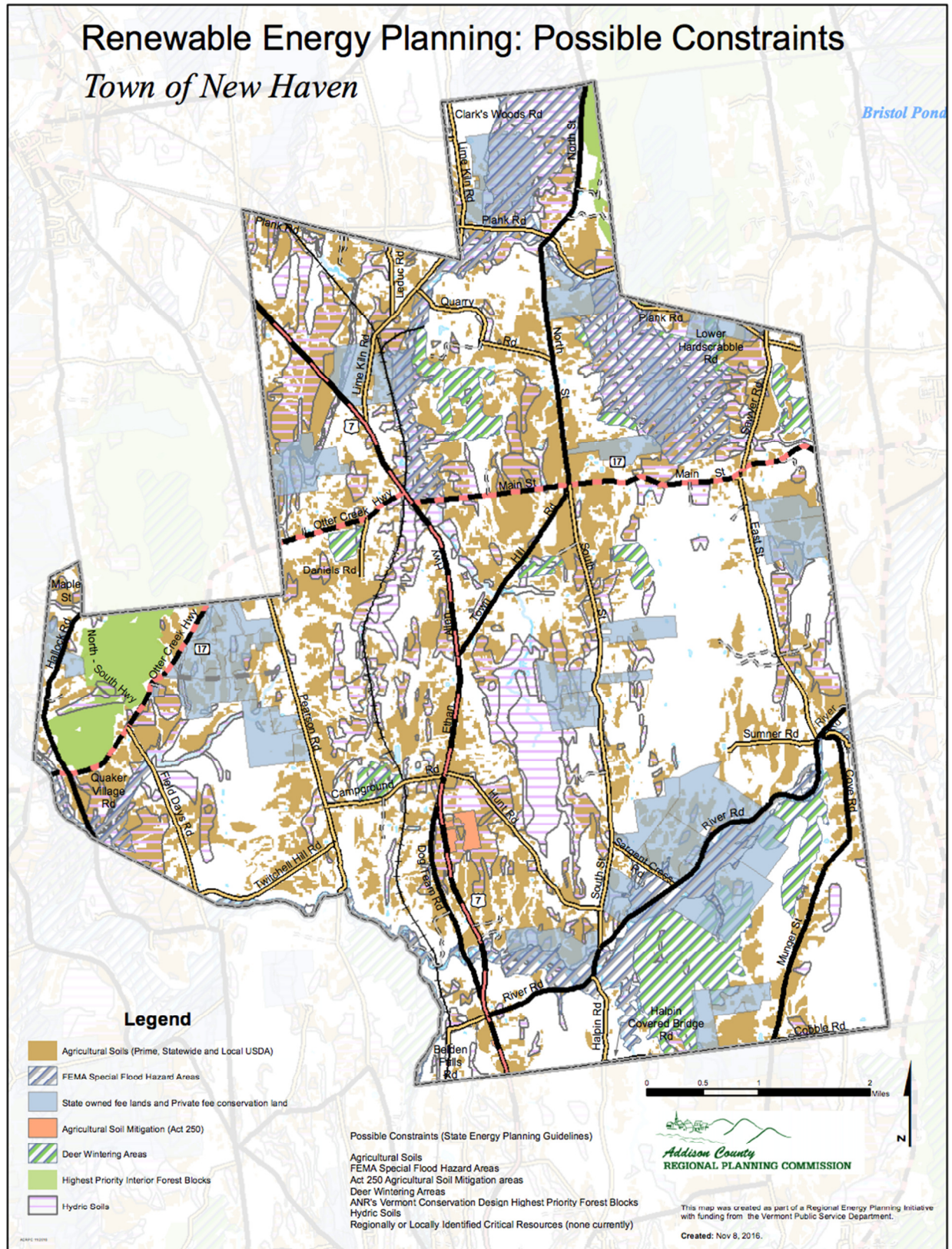


FIGURE 24. Possible Environmental Constraints

Hydroelectric Development. The waters of Otter Creek supply power to run two electrical generating plants along the Town boundary. One of these, the Belden power plant, has its generating turbines located within New Haven. The other, at Huntington Falls, generates power from turbines located within the Town of Weybridge. The Town supports the continued operation of these existing plants in providing low cost electrical power. However, the Town discourages construction of any additional plant at Battell Gorge because of that area's recreational and ecological assets. The Belden Falls hydroelectric facility is low-impact certified, and was approved by FERC in 2014 for expanded production capacity. The Town supports this expansion, provided the facility maintains its low-impact status and its expansion is mindful of the environmental and recreational value of its surroundings and river corridor.

For the purposes of these standards, "energy plant" and "energy project" refer to any facility that generates energy, such as, but not limited to, wind turbines, solar panels, hydroelectric facilities, and fossil-fuel or other conventional energy generation projects.

Solar Electric Generation Development. New Haven has already done its part to exceed the state distributed generation electricity production goals. Therefore, since New Haven already hosts more solar photovoltaic electricity generating panels than the electricity it consumes, and since electrical output from solar panels has already strained the capacity of our distribution lines to carry electricity within New Haven, and since New Haven already has VELCO lines and does not want any more transmission lines, New Haven does not allow any solar panels on any parcel if the electricity is to be used or credited to meters off-site.

New Haven will not allow Concentrated Solar Power (CSP) technology within the Town. New Haven anticipates that the next five to ten years are likely to see additional changes and advances in electric generation technology. No existing solar photovoltaic facility shall be changed to CSP or other forms of solar electric power production.

Solar Photovoltaic Potential Siting Areas. Potential areas suitable for solar photovoltaic siting in the Town of New Haven are those areas already developed as net-metering or standard offer projects, which may remain in solar photovoltaic production within the same footprint of their present development; and residential and local business properties for on-site use for new and existing construction (preferably rooftop rather than ground-mounted installation). If GMP distribution circuit constraints are resolved -- that is, if the distribution lines go from red or yellow to green -- then solar photovoltaic development may also occur in New Haven's designated industrial zones provided that they meet other siting and screening standards as delineated elsewhere in this Plan.

Other Electrical General Facilities Siting. Wind power generating electricity for on-site use may be developed on any residential, farm or business property in the Town exceeding

5 acres, and provided that such wind power development meets the setbacks and other siting and screening standards described elsewhere in this Plan.

Notwithstanding restrictions on electrical generation development on prime and statewide agricultural soils stated elsewhere in this Plan, existing farms may develop methane digester electric generation facilities for on-site or for sale of electricity through the utility distribution system; such development supports New Haven's agricultural economy directly by facilitating a secondary income stream through already-generated farm products (manure).

Siting of Other Renewable Energy Resources. State statutes and energy planning unfortunately all too often conflate the terms 'energy' and 'electricity'. Renewable energy resources include those addressing non-electricity energy requirements, particularly heat. The Town of New Haven allows and encourages at all locations in the Town residential, farm and business development utilizing wood heat including outdoor wood furnaces and pellet stoves, geothermal heating, heat pumps, passive solar construction, weatherization and other energy conservation measures.

Standard Offer Projects. The Town of New Haven hosts the 2.2MW Cross Pollination solar array, and as of the writing of this Town Plan is the locus of a proposal for an additional 2.2MW solar array on Field Days Road the application for which is pending before the PSB. Cross Pollination was one of the first solar photovoltaic developments in the State, and the Town supported its development as a ground-breaking move towards a non-extractive energy future. The Town was unaware at the time of the efforts that would be required to secure installation of the aesthetic mitigation components of this project.



Commercial solar development is out of scale with New Haven's landscape. This illustration, prepared by landscape architect Mike Lawrence, demonstrates that a 20 acre Standard Offer 2.2MW project is slightly larger than the Williston Home Depot and the parking lot it shares with Walmart. This is far larger than any other structure in the Town.

Standard Offer Pilot Project "Preferred Location" definition includes:
(VII) A specific location designated in a duly adopted municipal plan under 24 V.S.A. chapter 117 for the siting of a renewable energy plant or specific type or size of renewable energy plant, provided that the plant meets any siting criteria recommended in the plan for the location.

Additional Standard Offer projects are not of a scale appropriate for development in New Haven. Their size vastly exceeds that of the largest structures in the community and inherently degrades the intact rural, scenic and historic landscape. The Town therefore designates as the site of Standard Offer renewable energy plants only those locations already so developed, and only for the duration of their CPGs, which exceeds the effective length of this Town plan.

Consistency with Various State Energy Goals, as Required by 24 V.S.A. § 4348a(a)(3)

(A) Vermont's greenhouse gas reduction goals under 10 V.S.A. §578(a);

Vermont has established ambitious greenhouse gas reduction goals. Under 10 VSA §578(a), it is established as a general goal of the state “to reduce emissions of greenhouse gases from within the geographical boundaries of the state and those emissions outside the boundaries of the state that are caused by the use of energy in Vermont in order to make an appropriate contribution to achieving the regional goals of reducing emissions of greenhouse gases from the 1990 baseline by:

(1) 25 % by January 1, 2012;

(2) 50 % by January 1, 2028;

(3) if practicable using reasonable efforts, 75 % by January 1, 2050.”

The state as a whole fell far short of meeting its 2012 goal.¹ Emissions in 2012 were approximately the same as they were in the 1990 baseline year. Between 1990 and 2012 these numbers had escalated and then returned to approximately the same as the 1990 baseline of 8 million tons per year. According to the State Agency of Natural Resources, transportation is the primary obstacle to movement towards the states' goals: while emissions from agriculture have diminished, transportation energy use has risen significantly. Residential, commercial and industrial fuel use has also risen. The increase in these energy uses offset the reductions created in agriculture and other sectors².

The Town encourages diversification of agriculture, and development of methane digesters that will reduce agricultural greenhouse gas emissions. The Town maintains a park-n-ride and has established land and economic development patterns to diminish transportation greenhouse gas emissions. Town land use regulations strongly protect natural vegetation including forest blocks and wetlands that counter greenhouse gas emissions.

This Town Plan is consistent with the state's greenhouse gas reduction goals.

(B) Vermont's 25 by 25 goal for renewable energy under 10 V.S.A. §580;

This Vermont statutory energy goal states as follows:

¹ <http://digital.vpr.net/post/vermont-falls-far-short-2012-emissions-goals#stream/0>

² <http://anr.vermont.gov/sites/anr/files/specialtopics/climate/documents/newsletter/CC%20Newsletter%20Winter%202012.pdf>

§ 580. 25 by 25 state goal:

(a) It is a goal of the state, by the year 2025, to produce 25 % of the energy consumed within the state through the use of renewable energy sources, particularly from Vermont's farms and forests.

It is unclear how this goal dovetails with the goal of the 2016 State Comprehensive Energy Plan for 90% renewably-source energy by 2050.³ It would seem that the 2016 Comprehensive Energy Plan goals have superseded this 25% goal; however, the 25 by 25 goal also seems to indicate a desire for energy generated within the state from “Vermont’s farms and forests”, which would further indicate a preference for wood, biomass, and biomethane (cow power) energy generation rather than the wind, solar and hydropower emphasized in other state renewable energy plans. Since much of Vermont’s energy usage is in transportation, however, this goal presents difficulties .

This New Haven Town plan is consistent with this state energy goal -- and has in fact met it within the thermal sector. As indicated by the Community Surveys data referenced in the analysis of heat resources above, 30% of heating energy in New Haven comes from non-extractive resources; most of this is wood and wood pellets.

Renewable energy is produced within the Town in excess of the use of energy within the Town. The Town also supports energy generation facilities -- appropriately sited and operated -- that arise from agricultural practices such as biomethane energy generation. The Town also encourages use of energy conservation building techniques including passive solar construction and geothermal heating (such as that at the Town Offices), which comprise provision of energy through local resources.

The Town also recognizes that our farm and forest resources contribute not only to our high quality of life but also to clean air and the reduction of carbon emissions. Protection of our farmlands and forest blocks makes a significant contribution to greenhouse gas emission goals.

(C) Vermont’s building efficiency goals under 10 V.S.A. § 581;

§ 581. Building efficiency goals

It shall be goals of the State:

³http://publicservice.vermont.gov/sites/dps/files/documents/Pubs_Plans_Reports/State_Plans/Comp_Energy_Plan/2015/2016CEP_ES_Final.pdf

(1) To improve substantially the energy fitness of at least 20% of the State's housing stock by 2017 (more than 60,000 housing units), and 25% of the State's housing stock by 2020 (approximately 80,000 housing units).

(2) To reduce annual fuel needs and fuel bills by an average of 25% in the housing units served.

(3) To reduce total fossil fuel consumption across all buildings by an additional one-half % each year, leading to a total reduction of six % annually by 2017 and 10% annually by 2025.

(4) To save Vermont families and businesses a total of \$1.5 billion on their fuel bills over the lifetimes of the improvements and measures installed between 2008 and 2017.

(5) To increase weatherization services to low income Vermonters by expanding the number of units weatherized, or the scope of services provided, or both, as revenue becomes available in the Home Weatherization Assistance Fund.

The Town is dedicated to energy cost savings for all Town-managed buildings and facilities to ensure low cost annual operations into the future. This commitment includes, but is not restricted to, purchase or adaptation of the most efficient lighting, insulation and heating systems for these buildings.

In addressing residential energy efficiency, we endorse the standards put forth in the state's Model Energy Code for new construction. Under this legislation, all new residential construction is required to meet these standards and be so certified by the builder.

In addition to energy codes for new residential, commercial and public buildings, there are a number of other programs offered by the state to promote municipal energy efficiency and the use of renewable energy resources, such as the School Energy Management Program and programs that support the conversion of school heating systems to wood-burning systems. Municipal energy savings can continue to be realized through regular energy audits of municipal buildings and the use of "life cycle costing" practices that incorporate long-term energy savings in the fiscal analysis of facility construction and equipment purchases. Such costing methods often demonstrate that long term energy savings more than offset the higher initial purchase or construction cost of energy-efficient equipment and building improvements. The Town will explore methods of incentivizing energy efficient residential and commercial development through its local zoning and subdivision regulations and local energy assistance programs.

In residential development that passes through the Town land use approval processes including Planned Unit Development or Subdivision approval, the Town will encourage

additional energy conservation measures including passive solar construction, geothermal heating, heat pumps, and high-efficiency lighting and appliances.

(D) State energy policy under 30 V.S.A. § 202a and the recommendations for regional and municipal energy planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the State energy plans adopted pursuant to 30 V.S.A. §§ 202 and 202b (State energy plans)

30 VSA §202a states:

It is the general policy of the state of Vermont:

(1) To assure, to the greatest extent practicable, that Vermont can meet its energy service needs in a manner that is adequate, reliable, secure and sustainable; that assures affordability and encourages the state's economic vitality, the efficient use of energy resources and cost effective demand side management; and that is environmentally sound.

This New Haven Town Plan is consistent with the policy of the State of Vermont set out in 30 VSA §202a. New Haven seeks to ensure that energy service in the Town of New Haven is adequate, reliable, secure and sustainable by ensuring that our local distribution lines are not saturated and our local utility infrastructure not overloaded so that Town residents may continue to enjoy high quality continuous electrical service. The Town's actions also seek to ensure that local residents and businesses will have access to line capacity necessary for distributed generation that serves their on-site needs, thus containing their electricity costs as well ensure a robust local economy with a stable energy infrastructure to support local and home businesses and occupations.

The Town is mindful that GMP filed on August 1, 2016 for a rate increase due to the increased costs to the utility of distributed generation, particularly net metering. The Town accordingly seeks to limit additional distributed generation facilities within the Town to those which serve primarily on-site needs; keeping generation tied closely to demand will obviate the need for transmission of distributed generation, and thus help keep utility bills low for Town residents as well as increasing the stability and reliability of the local distribution elements of the electric grid. The Town is also mindful that inappropriate distributed generation development diminishes property values and thus tax revenue, thereby also increasing costs to Town residents. The Town encourages energy conservation, and precludes or significantly curtails facilities development in environmentally sensitive areas including prime agricultural soils, wetlands, forested areas, special habitat areas, as well as in scenic viewsheds and in locations that would negatively impact historic and cultural resources.

As of this writing, the State energy plans do not yet contain specific recommendations for regional and municipal energy planning. The 2016 Comprehensive Energy Plan was adopted prior to the legislature's adoption of Act 174.⁴ Page 61 of that CEP, however, adopts by reference the Vermont Natural Resources Council and Vermont League of Cities and Towns guidebook, *Energy Planning and Implementation Guidebook for Vermont Communities*.⁵ This 2011 guidebook is somewhat out of date, but still provides a useful reference framework for municipal energy planning. The guidebook in turn adopts by reference the Vermont Agency of Commerce and Community Development Planning Manual. The first two of three volumes of the 2016 edition of the Planning Manual have been released at the time of this writing of this 2016 New Haven Town Plan.⁶

The Vermont Department of Public Service on November 1, 2016, released a checklist for communities and regional planning commissions to use in devising an Enhanced Energy Plan; that checklist mirrors the statutory requirements set out in this Plan.

(E) the distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under 30 V.S.A. §§ 8004 and 8005; and

State statute is unclear as to the standard by which municipalities are anticipated to meet this requirement relative to a determination of energy compliance. However, this New Haven Town Plan meets or supports the provisions of 30 VSA §§8004 and 8005 by being host to a wide array of renewable energy resources including each of the categories listed by RES (with the present exception of biomass/biomethane), by encouraging the retirement of RECs, and by encouraging energy conservation measures.

The Town of New Haven hosts significant quantities of renewable energy generation resources (§8005(a)(1)); distributed renewable generation facilities including SPEED/Standard Offer and net metering solar photovoltaic generation (§8005(a)(2)); energy transformation projects including encouraging energy conservation, and hosting a planned HVDC converter facility bringing renewably-sourced power through the regional transmission lines (§8005(a)(3); the Town is striving to ensure sufficient capacity remains on local distribution circuits to allow for local development of biomass or biomethane facilities that support the local farm and forestry economy (§8005(c); and the Town hosts a

⁴ https://outside.vermont.gov/sov/webservices/Shared%20Documents/2016CEP_Final.pdf

⁵ <http://vnrc.org/wp-content/uploads/2012/08/Final-Guide-4-27-11.pdf>

⁶ <http://accd.vermont.gov/community-development/town-future/municipal-planning-manual>

GMP-owned low-impact certified hydropower facility (§8005(d)). The Town also hosts, at present, four small wind-power generation facilities for on-site use.

(4) meet the standards for issuing a determination of energy compliance included in the State energy plans.

It is unclear how the State legislature intended this Act 176 requirement of 24 V.S.A. § 4348a(a)(4) to differ from the same requirement stated in 24 V.S.A. § 4348a(a)(3)(D), above. They appear to be identical -- compliance with State energy plans. As stated above, this New Haven Town Plan meets these standards.

Siting, Screening And Performance Standards Applicable To All Utility/§248 Projects In New Haven

The Town's experience with recent projects (further described in the Energy Plan section) has led to the following specific standards to be required of any utilities or other §248 developers, including energy, fuel, and communications project developers, to limit and mitigate impacts on the Town's health, safety and scenic character. The Town expressly intends these standards to reflect the position of the Town and to be given the maximum deference, weight and consideration in any proceeding before the Vermont Public Service Board or other regulatory agencies or courts. These standards are in addition to standards pertaining to ground-mounted solar development siting and screening contained in the Energy Plan section.

It is also the Town's policy to intervene in utility and other §248 project review processes for project proposed in other towns at locations near New Haven's borders, and to request that these same standards be applied to the extent that the proposed project would affect New Haven property, scenic views, historic and natural resources, or aesthetics from public roadways, recreational resources or New Haven residences.

- **Noise.** Strict noise limits must be imposed on any substations, converter stations, natural gas gate stations, generating plants, and any other utility or merchant §248 projects or infrastructure to avoid adverse impacts on the Town and its residents. To comply with this standard, noise levels at the property line, or the line of legal control for a project (whichever is lesser) cannot exceed 45dBa between 8 a.m. and 5 p.m. Monday through Friday and 40dBa at all other times. Such standards must be imposed in an enforceable manner requiring reasonable monitoring and timelines for compliance.

- **Aesthetics.** Utility and other §248 infrastructure must be sited in a manner that minimizes impacts on scenic views, public highways, and nearby property owners. Each project must incorporate screening that breaks up the visible area of the project in a manner that: prevents unobstructed views of the project; mitigates adverse aesthetic impacts on views from residences, public highways and recreation resources; and harmonizes the project with the character of the surrounding landscape and neighborhood including historic and scenic resources and natural areas. All projects must comply with the requirements of any duly adopted siting and screening bylaws or ordinances.
- **Health and Safety.** Utility and other §248 infrastructure must be developed and maintained with safeguards to preserve the health and safety of residents and visitors to New Haven. Developers of projects that pose unique or increased health or safety risks must provide public safety agencies serving the Town with training, equipment and compensation commensurate with the increased risks.
- **Landowner and Public Impacts.** Utility and other §248 projects must make full use of existing infrastructure before new infrastructure is built. Proposed utility infrastructure must be designed to provide substantive economic benefits to the Town and its residents. Developers of projects that impose significant adverse effects on New Haven or individual residents or landowners must provide compensation to the Town and affected parties.
- **Eminent Domain.** The use of eminent domain to take property or property rights in New Haven is strongly discouraged. Utilities and other §248 project developers must use all available measures to reach voluntary resolutions with property owners that do not require the use of eminent domain.
- **Electric Transmission Lines.** Electric transmission and distribution lines, including those used to service new development in the Town, must meet the following standards:
 - All transmission lines and infrastructure must be constructed underground.
 - If lines must be constructed above ground, single poles, as opposed to H-frame poles, will be used in all locations clearly visible from public vantage points.
 - In locations where the lines will be clearly visible from public vantage points, multiple lines shall be carried on a single set of poles where ever feasible to minimize visual clutter, with recognition that this will need to be balanced with the Town's interest in avoiding excessively tall poles.
 - If new poles are proposed to be placed alongside existing poles, the new poles will be aligned with existing poles to minimize visual clutter and will not be located any closer to the highway than any existing pole.
 - Where above ground electric transmission lines cross state or Town roads, the distribution lines along those roads must be placed underground as needed to

- avoid increasing the height of the transmission line and associated poles.
- Wherever landscaping or other aesthetic mitigation is required, an easement or property will be purchased as needed to allow adequate space to accommodate the required mitigation. Landscaping along the road should consist of salt-tolerant shade trees to be planted at a minimum of 50-foot intervals within landscaping buffer where large trees will not interfere with the lines or access to adjoining property. Under the lines, a naturalistic buffer of small trees and shrubs should be planted.

Solar Siting, Screening And Setbacks

30 VSA §248 states, in regards to municipal authority to adopt screening bylaws for ground-mounted solar arrays:

(b) Before the Public Service Board issues a certificate of public good as required under subsection (a) of this section, it shall find that the purchase, investment or construction:

(1) With respect to an in-state facility, will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of the municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. However:

...

(B) with respect to a ground-mounted solar electric generation facility, shall comply with the screening requirements of a municipal bylaw adopted under 24 V.S.A. § 4414(15) or a municipal ordinance adopted under 24 V.S.A. § 2291(28), and the recommendation of a municipality applying such a bylaw or ordinance, unless the Board finds that requiring such compliance would prohibit or have the effect of prohibiting the installation of such a facility or have the effect of interfering with the facility's intended functional use.

New Haven's relatively flat and open topography and its proximity to electrical transmission infrastructure has made the Town a particularly attractive location for solar development. As a result, the Town has experienced a dramatic increase in applications for both small- and large-scale solar energy generation projects. In fact, the Town has the second most solar photovoltaic facilities of any Town in the State, according to the Community Energy Dashboard data. The siting of solar projects has created considerable controversy and discussion among the Town's residents, who have made their views known at public hearings, Town meetings, planning forums and in survey responses submitted to the Planning Commission.

Many New Haven residents - including supporters of renewable energy - have serious concerns about the impact of the increasing number of poorly sited solar facilities on New Haven's rural, agricultural, and scenic character. Based on survey results and public input, it is evident that a clear majority of residents are in favor of reasonable screening, siting and size requirements to limit the adverse impacts of solar and other renewable energy facilities.

The Town of New Haven has adopted the following community standards for determining whether an energy generation project is in conformance with this Plan. The Town expressly intends these standards to reflect the position of the Town and to be given substantial consideration in any proceeding before the Vermont Public Service Board or other regulatory agencies or courts. The Town will adopt local ordinances and bylaws implementing these standards as authorized by Vermont's Act 56 of 2015. The following standards are in addition to those standards applying to all utility and other §248 projects as set out above.

It is also the policy of the Town to intervene and participate, to the extent that the Selectboard deems it appropriate and in the Town's interest, in any §248 proceedings for energy generation plant proposals located in adjoining Towns at locations near New Haven's borders, and to request that such projects comply with the following standards to the extent they impact New Haven property or scenic, historic or natural resources, or the view from New Haven residences, public roadways or recreation resources.

Energy Plant Siting Standards. The following community siting standards are intended to avoid and limit adverse impacts associated with energy generation facilities by providing guidelines for siting such development in appropriate locations and for designing such development to be compatible with the Town's rural, agricultural and scenic character. These standards are also intended to achieve proportionality within the state's energy goals and ensure that projects result in a net benefit to the Town.

Use Classification. A small net-metered or off-grid renewable energy facility, including a solar array, small wind facility or combined system intended solely to serve an individual residence or business and generating less than 15kW, will be considered an accessory structure allowed in all zoning districts in which such structures are allowed. No other energy generation facility type or size shall be considered a permitted use in any district in the Town; while such uses may not be subject to municipal land use regulation under 30 VSA §248, they shall be considered unenforceable zoning violations for zoning purposes. Accordingly, no energy generation or other §248 facility shall have the effect of converting

the land use classification of any parcel or portion of a parcel of land to a more intensive use than that of the zone in which the parcel is located.

Abandonment and Decommissioning. Energy generation plant permits or certificates must include provisions for system abandonment, decommissioning and site restoration. Developers of energy projects and landowners hosting such projects must jointly and severally provide the Town with appropriate sureties or other assurances to guarantee decommissioning of the project, infrastructure removal, and site restoration.

Access. All new electrical service lines must be installed underground to the maximum extent feasible.

Project access must be provided from existing access roads where physically feasible, and access roads and utility corridors should be shared to minimize site disturbance, resource fragmentation, the creation of additional edge habitat, and the introduction and spread of invasive exotic species.

The project development must obtain and comply with right-of-way work permits and overweight truck permits where necessary; and must mitigate and/or compensate any identified impacts to public highways from plant construction, operation and maintenance, including highway improvements required to accommodate the plant.

Public access to generation and transmission plants, including substations, must be restricted as necessary to protect public health and safety.

Signs. Signage associated with energy generation plants must be limited to the minimum required to meet federal or state code requirements. Energy facilities and structures shall not be used for display or advertising purposes. Signs, except for owner and manufacturer identifications and safety warnings that do not exceed one square foot, are prohibited on all structures.

Lighting. In accordance with the town's Dark Sky policy, energy facilities, including wind and transmission towers, are not to be artificially lighted except as necessary to meet Federal Aviation Administration requirements, or, at the minimal levels feasible, as necessary to provide safe access to and conditions on the site for required monitoring or maintenance purposes, and/or as required to meet federal or state code requirements. All outdoor lighting fixtures must be fully-shielded and must not result in light trespass or glare on roads or surrounding properties.

- ◆ An Obstacle Collision Avoidance System (OCAR) as approved by the FAA shall be used to avoid visual lighting impacts. If an OCAR cannot be approved, the FAA lighting alternative that results in the least amount of visual

disturbance, and minimizes project visibility from public roads and vantage points, shall be incorporated in system design.

◆ Substation lighting should be the minimum necessary for site monitoring and security, should be cast downward, and must not result in light trespass or glare on adjoining properties.

Interference. Facility operation shall not reduce or interfere with television, radio, telemetry, or other telecommunications signals, including public safety communications systems.

Codes. Energy generation plants must comply with all manufacturer specifications, state, federal or industry safety and electric codes, and utility connection requirements. The developer must provide documentation of code compliance.

Forest Conservation. Clear cutting of forestlands to accommodate a project with a footprint larger than ½ acre is prohibited. Energy facilities, including wind towers and other generation facilities, transmission and distribution lines, accessory structures and access roads are to be located along existing tree lines, or on otherwise disturbed forestland, as necessary to avoid the fragmentation of, and to minimize and mitigate adverse impacts to productive timber stands and critical forest habitat. Forestland intended for commercial biomass production must be sustainably managed and harvested in a manner that preserves critical forest habitat and long-term forest health.

Sensitive Natural Resource and Special Hazard Areas. With the exception of transmission and distribution lines, commercial projects and energy plants that are not attached to existing or permitted structures must not be located within special flood hazard areas, river corridors or within 50 feet of any surface waters, wetlands and any required buffers, or on steep slopes with a natural (pre-development) grade in excess of 15%.

Conservation/Open Space Areas. Energy plants must be sited to avoid significant wildlife habitat and travel corridors including, but not limited to, deer wintering areas and core habitat areas. Development of energy plants on conserved land (such as land subject to a conservation easement or land under public ownership for conservation purposes) is not appropriate and is prohibited.

Facility Siting Standards Site Designation. Sites planned for or intended to accommodate planned energy facility development, including the location of existing and planned commercial and net-metered generation facilities and utility corridors, are to be shown on site development and subdivision plans reviewed by the town.

Building-Mounted Solar Panels. Solar panels on existing or permitted buildings should be allowed in all land use districts.

Glare. All reasonable efforts must be taken to prevent glare that would adversely impact drivers or nearby residents, including but not limited to the use of non-glare equipment and infrastructure, and appropriate screening.

Agricultural Soils. Energy projects must not be sited or otherwise impact agricultural soils classified as “Prime” or of statewide significance by the USDA Natural Resources Conservation Service (NRCS).

Agricultural Land and Open Space. Energy facilities, including solar arrays and other generation facilities, transmission and distribution lines, accessory structures and access roads are to be located on nonagricultural land or along field edges to avoid fragmentation of, and to minimize and mitigate adverse impacts to agricultural land and open fields.

Height. Zoning district height limitations under local bylaws, where applicable, shall apply to renewable energy facilities. The Town shall adopt height limitations in conjunction with its next zoning bylaw revision.

◆ The maximum tower height for net-metered, or similar off-grid wind energy facility shall not (a) exceed 120 feet in total height, as measured vertically from the ground to the rotor blade tip at its highest point, or (b) extend in total height more than 30 feet above the existing tree canopy or other obstructions within 300 feet of the tower, whichever is greater.

Ground Clearance. The blade tip of any wind turbine shall, at its lowest point, have a ground clearance of no less than 30 feet, as measured vertically from the ground to the tip of the rotor blade at its lowest point.

Shadow Flicker and Ice Throw. Wind energy facilities shall be sited or screened so that shadows cast by rotor blades will not result in shadow flicker on occupied buildings located in the vicinity of the project, and shall not result in shadow flicker or ice throw on any land other than that owned by the host landowner.

Burial. Utility controls and onsite line connections shall be wireless or buried, except at the point of connection with distribution lines.

Designated Scenic Areas. The documented historic, rural and scenic character of the following areas in the Town of New Haven shall be preserved. New energy facilities sited within or as viewed from these areas shall not create a significant physical, visual, audible,

or historically incongruous or incompatible intrusion into these areas. New facilities, including generation facilities greater than 15 kW, substations and transmission lines, are specifically prohibited within or as viewed from these areas unless significant associated impacts can be avoided, for example through facility siting, screening or line burial.

- ◆ Designated historic districts, including the Village Center, and districts deemed eligible for National Historic Register status, including Brooksville;
- ◆ Town-owned conservation and recreation lands;
- ◆ Views from locally designated scenic roads, as listed elsewhere in this Plan, or as subsequently designated by the New Haven Select Board;
- ◆ Scenic Viewsheds as identified elsewhere in this Plan.

Historic Districts, Sites and Structures. Energy facilities, including wind systems and solar photovoltaic (PV) or thermal panels, that are located in the town's three designated historic districts, or on or adjacent to properties with federal or state-listed historic structures, are to be sited in accordance with current Secretary of the Interior's Standards for Rehabilitation, and the following:

- ◆ The historic character of listed properties and structures shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- ◆ Ground installations may be preferred to roof mounted installations on certain historic structures. Ground installations shall be installed in locations that minimize their visibility, such as a side or rear yard, and be screened from view of public rights-of way and adjoining properties.
- ◆ Roof-mounted systems may be placed on new construction, non-historic buildings and additions, and may be appropriate or preferred for certain historic structures, and for rehabilitation or expansion projects on historic structures.
- ◆ Solar panels and other roof- or wall-mounted structures shall not be placed on primary building facades, including street-facing walls or roofs.
- ◆ Roof- or building-mounted systems on an historic structure shall not physically damage the structure, alter its character-defining features, including existing roof lines or dormers, nor obstruct significant architectural features such as overlaying windows or architectural detailing. Attachment points must be minimized and allow for future system removal.

◆ Roof-mounted installations are to be placed below and behind parapet walls and dormers, on rear-facing roofs, where feasible. Panels are to be mounted flush with and at the same angle as the existing roof surface and, on flat roofs, set back from the roof edge to minimize visibility. They should not be visible above the roofline of the primary facade. Panels and mounting systems must be compatible in color to established roofing materials to minimize their visibility

Solar project developers are directed to the National Park Service’s Technical Preservation Service publication/website titled “Solar Panels on Historic Properties” for further guidance and examples.⁷

Siting and Screening Requirements

Energy plants must be sited in a manner that does not impact scenic views and visibility from public highways and nearby properties. Each project must incorporate screening that obscures the view of the project in any designated scenic viewshed or from any designated scenic road or corridor. In any other location, the project must incorporate screening that effectively breaks up the visible area of the project in a manner that: prevents unobstructed views of the project; mitigates adverse aesthetic impacts on views from residences and public highways; and harmonizes the project with the character of the surrounding landscape and neighborhood. In addition to meeting these general standards, the requirements of any duly adopted siting and screening bylaws or ordinances must be complied with.

Examples of sites containing features that will help an energy plant to comply with New Haven’s community standards include the following:

- Sites that make use of existing hedgerows, vegetation, topography and other visual obstacles to reduce impacts on scenic views, public highways and nearby property owners.
- Sites with significant setbacks from public highways, property lines and residences.
- Sites located on or adjacent to areas that are already impacted by existing industrial development, former gravel pits or landfills, brownfields, and the like.
- Sites that have been identified by the Town as particularly suitable for development such as industrial zones and which otherwise meet these community standards.

⁷ <https://www.nps.gov/tps/sustainability/new-technology/solar-on-historic.htm>

Examples of sites containing features that will not comply with New Haven's community standards, and which are therefore prohibited, include the following:

- Sites that lack natural screening from public highways and nearby properties, and cannot be effectively screened by permanent, year-round plantings or other suitable screening.
- Sites that fail to meet setbacks or other development restrictions set forth in existing Town bylaws and ordinances (including restrictions applicable to either energy and/or commercial development).
- Sites that have been identified by the Town as particularly important for conservation, natural resources or scenic views.
- Sites that cause fragmentation and loss of the working landscape, such as forestland, open farmland, and/or prime agricultural soils.
- Land that is subject to conservation easements or other similar restrictions.
- Ridgelines and hilltops, including both ridgelines and hilltops that silhouette against the sky and those that silhouette against taller mountains.

Not all properties are suitable for development of energy projects. The fact that a developer may already have leased or purchased a particular project site should not carry any weight in the analysis of whether the project is suitable. If a project cannot comply with these standards, then the project is unsuitable for that site, and the developer must select a different and more appropriate site.

Any ground-mounted solar generation plant over 15 kW, or commercial structure with a similar footprint, must be sited and designed so that it will create no greater burden, including adverse visual impacts, on surrounding property owners or public infrastructure than it does on the property on which it is sited, unless the affected neighbor(s) consents in writing. For example, a resident must not site one or more free-standing solar panels in a location selected to minimize the visibility of the panel(s) from his/her residence, while placing the panel(s) where it will be more visible from a neighboring residence or a public vantage point. If the only feasible location for a solar plant or commercial structure on a property would violate this principle and the affected neighbor(s) do not consent to that location, then the property must be considered unsuitable for an energy plant.

In addition to screening, onsite mitigation should include placement of the remainder of the underlying parcel in permanent conservation easement, agricultural or silvicultural easement.

Screening must be sufficient to block the view of the panels from all vantage points - public or private.

Visual Impacts. Applicants must demonstrate through site planning, facility siting and proposed mitigation that the visual impacts of new and upgraded energy facilities will be minimized as outlined in the standards set forth below:

- ◆ All energy facilities and accessory structures are to be designed and constructed of materials, colors, and textures that blend into the surrounding natural or built environment to the extent feasible. Wind towers, turbines and blades shall be of a neutral, non-reflective and unobtrusive color (e.g., white, off-white or gray).
- ◆ Facilities are to be sited to outside of, or to the edge of scenic views or viewsheds so that they are not a prominent focal point.
- ◆ The facility should not extend above the background horizon line.
- ◆ The facility should be screened from view through the use of existing topography, structures, vegetation or strategically placed tree, shrub and ground cover plantings that do not block distant views.

Setbacks. Except for transmission and distribution lines and utility connections, all energy facilities – including substations, commercial, utility and non-utility generation facilities and accessory structures – must meet minimum setback requirements for the zoning district(s) in which they are located, including enhanced setbacks required at the boundaries of two zoning districts.

In addition:

- ◆ All ground-mounted wind energy facilities must be setback at least 1.5 times the total facility height, as measured vertically from the ground to the rotor blade tip at its highest point, from all property lines, occupied buildings on adjoining properties, overhead utility lines, public and private rights-of-way and established trail corridors, unless easements are secured from adjoining property owners.
- ◆ Guy wires used to support wind towers are exempt from minimum district setback requirements, but shall be set back at least 20 feet from all property lines.
- ◆ A building-mounted wind turbine or solar panel must meet minimum setback requirements for the building on which it is mounted. The installation of a net-metered or similar off-grid energy system on a nonconforming structure will not constitute an increase in the degree or amount of nonconformance under local regulations.

◆ Facility setback distances from property lines, or from occupied structures in existence at the time of application, should be increased as necessary to mitigate identified public health and safety hazards or nuisances to adjoining property owners (e.g., noise, vibration, glare, shadowing and shadow flicker, ice throw).

Subdivision. Energy and telecommunications facilities are frequently developed under lease or easement agreements with underlying landowners. State land use statutes authorize towns to adopt subdivision regulations addressing leases that are made for land development purposes. It is the policy of the Town of New Haven to require that prior to the lease or sales of land for land development -- including for §248 project development -- where the designated area for the proposed land development, together with its access ways and any areas required for aesthetic mitigation and setbacks, meets or exceeds the size of a lawful parcel within the zoning district in which it is located, the landowner must submit the proposed lease or sale to subdivision review and approval. Where the designated area for the proposed land development is smaller than that required for a lawful parcel within the zoning district in which it is located, no sale of a sub-sized parcel may occur; the project may proceed by lease or easement, without subdivision, and the designated development area shall continue to be considered lawfully as part of the underlying parcel. Lands leased for §248 project purposes may not be expanded or converted to any other use without first obtaining all applicable state and local land use permits. The Town shall adopt any amendments to its subdivision bylaws necessary to enact this policy.

Natural Resources

Natural Areas. The Vermont Department of Fish & Wildlife has identified six areas in New Haven that are considered “significant natural communities” and/or habitats of rare species. The portion of Battell Gorge has potential as an important ecological reserve, since the Middlebury Area Land Trust, Middlebury College and the University of Vermont already have significant holdings in the Gorge area. It is in the Town’s long-term interest to ensure that all these areas are protected from development.

There are several deer wintering areas mapped by the State Fish and Wildlife Department. The largest is along the New Haven River between River Road and Munger Street. The next largest surrounds the wetland on the East Branch of Little Otter Creek. To maintain healthy deer populations, development should not occur within these areas.

Resource Extraction. Extraction operations are necessary to provide materials for the construction industry and road maintenance. However, they also result in noise, dust, truck traffic and visual blight. Such operations also can create safety hazards, affect groundwater supplies, and result in the deterioration of local roads and infrastructure.

The adverse impacts of all extraction operations can be addressed to a certain extent through local and state regulations, and good management practices. The Town's zoning regulations should ensure that extraction operations have minimal impact on the Town and neighboring properties, and that sites are adequately reclaimed to allow for subsequent use once extraction is completed. Future resource extraction sites must be located in industrial zones.

Consideration should also be given to the compatibility of resource extraction and other land uses when determining where extraction will be allowed. Inversely, areas with known deposits of earth resources, hydro-carbons or groundwater may most appropriately remain available to supply needed materials in the future rather than be developed for other uses.



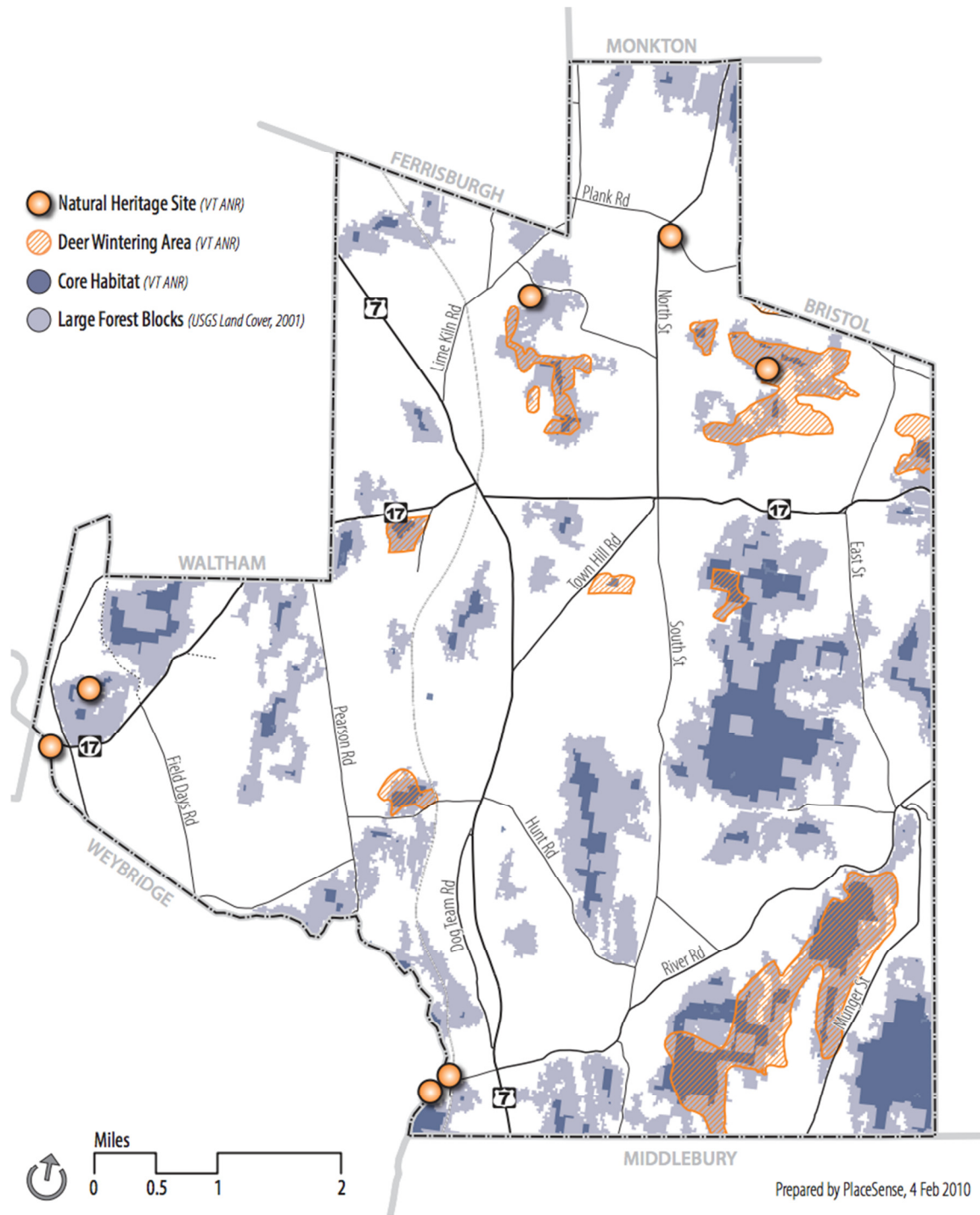


Figure 25. HABITAT MAP

Note: Base map omits the Town Trail and a small segment of the North South Highway; see VTRANS map for these elements, and Note Regarding Maps elsewhere in this Plan.

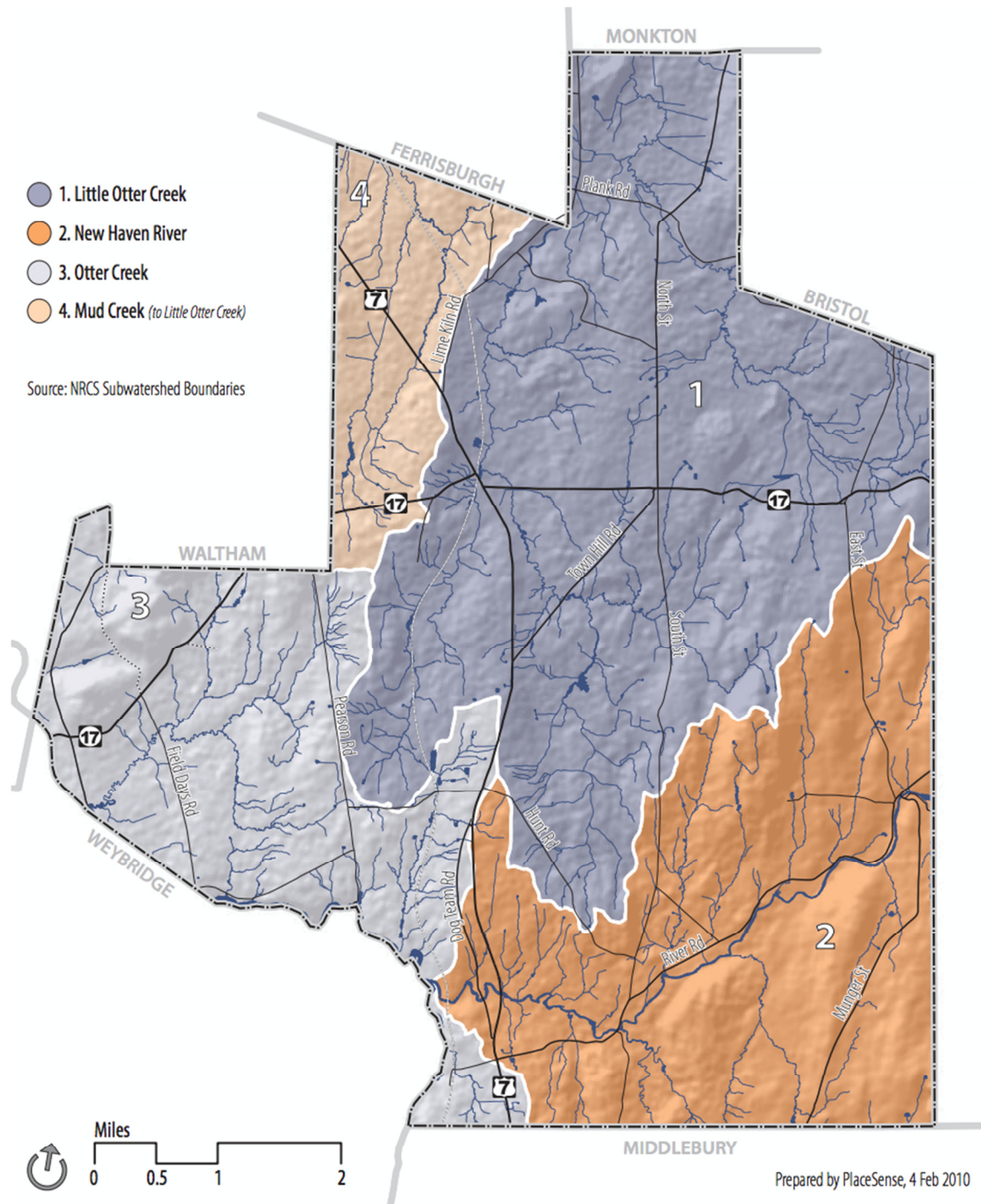


Figure 26. WATERSHEDS MAP

Note: Base map omits the Town Trail and a small segment of the North South Highway; see VTRANS map for these elements, and Note Regarding Maps elsewhere in this Plan.

Waterways and Wetlands

Surface Waters. New Haven's major surface waters form four watersheds

- Otter Creek (flows 4.5 miles through Town)
- New Haven River (6.0 miles)
- West Branch Little Otter Creek (4.1 miles)
- East Branch Little Otter Creek (3.8 miles)

The New Haven River is especially valued as a recreational resource. A local conservation group, The New Haven River Watch, was founded in 1993 to monitor, restore and protect the New Haven River. This group was formed in cooperation with the sporting group The New Haven River Anglers and the River Watch Network. Several years of monitoring both E. Coli and total phosphorus at various dates and locations have given a wide range of results.

The Town endorses the efforts of The New Haven River Watch to expand its monitoring and to work with local communities and residents to improve water quality. The maintenance and enhancement of shoreline or stream bank vegetation is the simplest and most effective means of protecting water quality. Buffers from stream banks, wetlands, and other bodies of water should be maintained in accordance with state and federal laws and regulations.

Appropriately vegetated shorelines contribute to maintenance of water quality and shoreline protection in the following ways:

- Provide bank support and stabilization, preventing bank undercutting and collapse;
- Provide food and shelter for fish and wildlife, and corridors for wildlife movement;
- Intercept, absorb, and filter out pollutants such as silt, fertilizers, toxic chemicals, and livestock wastes and slow surface runoff;
- Keep water temperatures cool during hot summer months when fish are susceptible to heat stress;
- Reduce flood and ice damage to stream channels, and adjacent lands and structures; and
- Preserve natural character of waters.

The Town recognizes the importance of natural ecosystems to the character and economy of the area and encourages the protection of wildlife habitats, particularly fisheries and deer yards. New Haven is fortunate to have fine streams on or within its borders, and it is the Town's policy to protect the quality of water in Otter Creek, the New Haven River and Little Otter Creek and to encourage efforts to improve that quality.



Otter Creek

Flood Resilience Plan 24 VSA §4382(a)(12).

The Town's Flood Resilience Plan as required by 24 VSA §4382(a)(12) is included as a component of the Town's All Hazard Plan, which is incorporated into this Town Plan and included as Appendix C.

Wetlands. Wetlands provide important environmental benefits including filtration of storm run-off, flood control and wildlife habitat. Wetlands also contribute to the variety of New Haven's scenery. Therefore, the Town wishes to conserve and limit development of its wetlands. The Town also recognizes that spread of wetlands onto land currently under agricultural cultivation may not be in the best interest of farmers. It is therefore appropriate for farmers to maintain the use of existing fields in accordance with state and federal regulations.

Flood Hazards. The Town also supports reducing hazards associated with flood events by protecting land within the floodplain and along highly erodible riverbanks from unrestricted development. By joining the National Flood Insurance Program and adopting flood hazard regulations, the Town has ensured that its residents may purchase flood insurance to protect their homes.

Recent studies of fluvial geomorphology along the New Haven River have identified areas along the river outside of the floodplain where the erosive actions of floodwater could cause damage to buildings and infrastructure. The Town supports identifying these hazards areas and including them in future revisions to the zoning and subdivision bylaws.

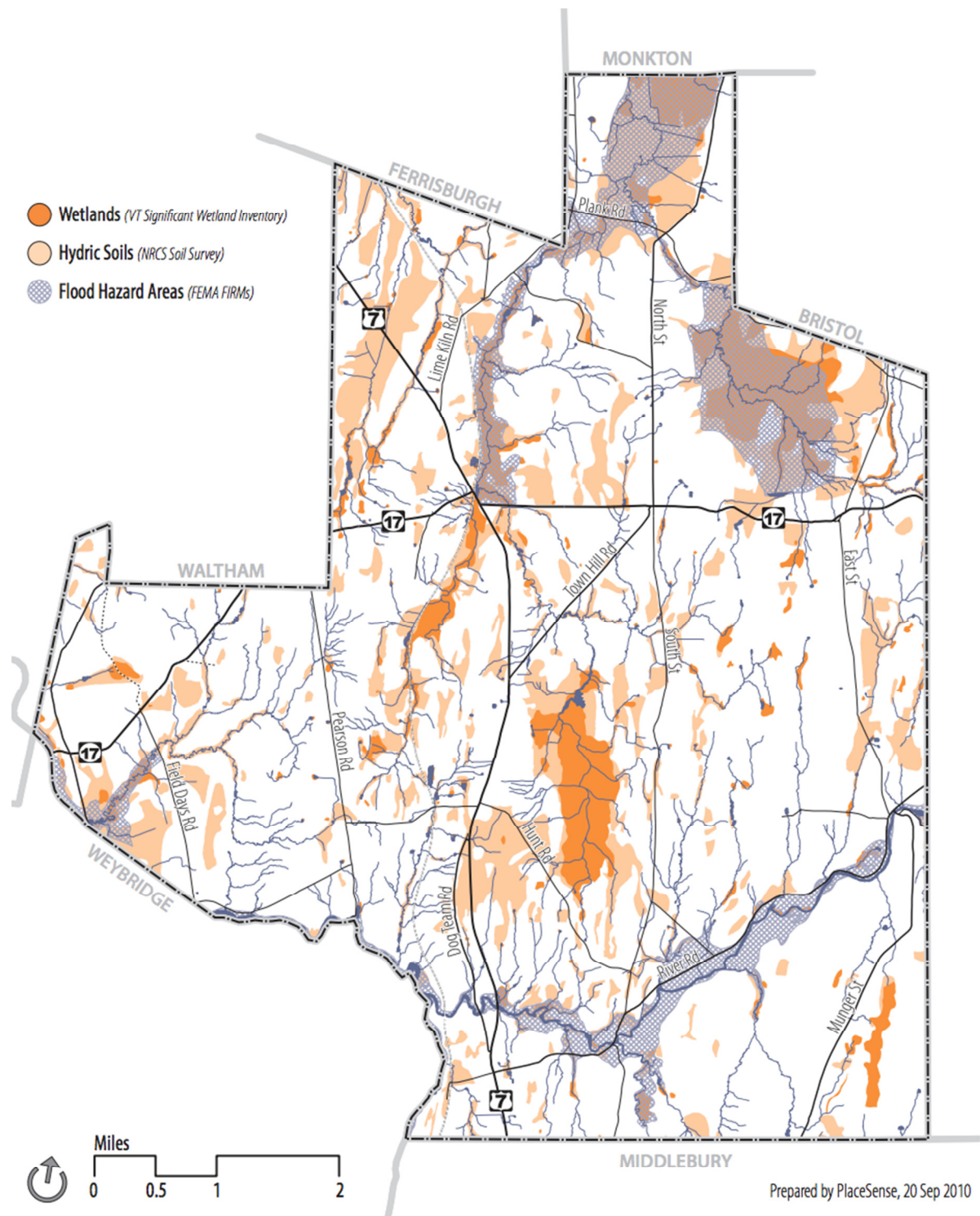


Figure 27. WETLANDS AND FLOOD HAZARDS MAP

Note: Base map omits the Town Trail and a small segment of the North South Highway; see VTRANS map for these elements, and Note Regarding Maps elsewhere in this Plan.

Scenic Resources

Rainbow from South Street. Photo: Brad Bull



The mandate of New Haven's residents is clear: Protect the Town's scenic resources. The beauty of New Haven greatly enhances the quality of life for residents as well as anyone passing through the Town whether on a daily commute or a once-in-a-lifetime vacation.

In assessing New Haven's landscape in the face of the VELCO line expansion project in 2005, then-Chairman of the Public Service Board Michael Dworkin, stated this:

The view eastwards is sustained and includes farms and villages, backed by the broad sweep of our Green Mountains, including the Bristol Cliffs Wilderness Area and the cliffs themselves. The view westwards shows the farmland of the Champlain Valley, backed by open lake and 5,000 feet of rise to the Great Peaks of the Adirondacks. These views are not just beautiful; they also epitomize the Champlain Valley's motto of 'a land of milk and honey' – a working landscape surrounded by natural beauties that refresh us as we work and live. Here we see the balance that Vermonters have inherited, preserved and created.

...[W]hile we can glimpse a balanced landscape in many places throughout Vermont, the New Haven views, even more than others, shows that balance to us all.

Farmland plays a significant role in New Haven's scenic richness. Town residents recognize the value of not only protected the scenic qualities of farmland, but in ensuring the economic viability of local farms. Residents have proposed a variety of possible economic approaches to protecting the Town's cultural heritage farming landscape, while also supporting farm families.



Much of the Town's most valuable scenic resources are located within the Rural Planning Area, and more specifically within the RA Zoning District. New Haven's density-based zoning and preclusion of most non-agricultural commercial and industrial uses within the RA Zoning District provides significant protection to these scenic resources. Design and siting standards, as discussed in the Rural Planning Area segment of this Town Plan, as well as the siting and screening standards delineated in the Energy Plan segment of this Town Plan, also help to protect the Town's substantial aesthetic assets. The Town's dark sky policy will help protect night time aesthetics as well.



Photo: Mike Lawrence, Landscape Architect

Several local and state resources form the foundation for future planning for protection of New Haven's rich aesthetic resources. These include: a scenic viewsheds map developed by two former members of the planning commission, which is available at the Town Offices; a Route 7 corridor study done in conjunction with the Planning Commission, also available at the Town Offices; an extensive statewide visual resource guide developed by T.J.Boyle for the Vermont Public Service Board in the 1970s (utilized by several towns in Vermont such as Whiting to define their scenic areas; the book is out of print, and attempts will be made to ensure a copy is available at the Town Offices); and the 1991 Vermont Agency of Natural Resources publication, *Vermont's Scenic Landscapes: A Guide for Growth and Protection* by Elizabeth Courtney (also out of print, and attempts are being made to secure a copy for the Town Offices). Other resources include the National Park Service guidance documents for identifying and preserving cultural landscapes.

Over the next few years, the Town will study these resources and engage the community to develop a scenic resource protection plan. Potential tools to be considered will include economic incentive and support measures.

In the meantime, the Town has long designated three roadways in the Town as scenic corridors: the Otter Creek Highway (Route 17 west of New Haven Junction); Main Street (Route 17 east of New Haven Junction); and the Ethan Allen Highway (Route 7, excluding the highway commercial and industrial zones). The vistas from these scenic corridors are scenic viewsheds and must be maintained and preserved.

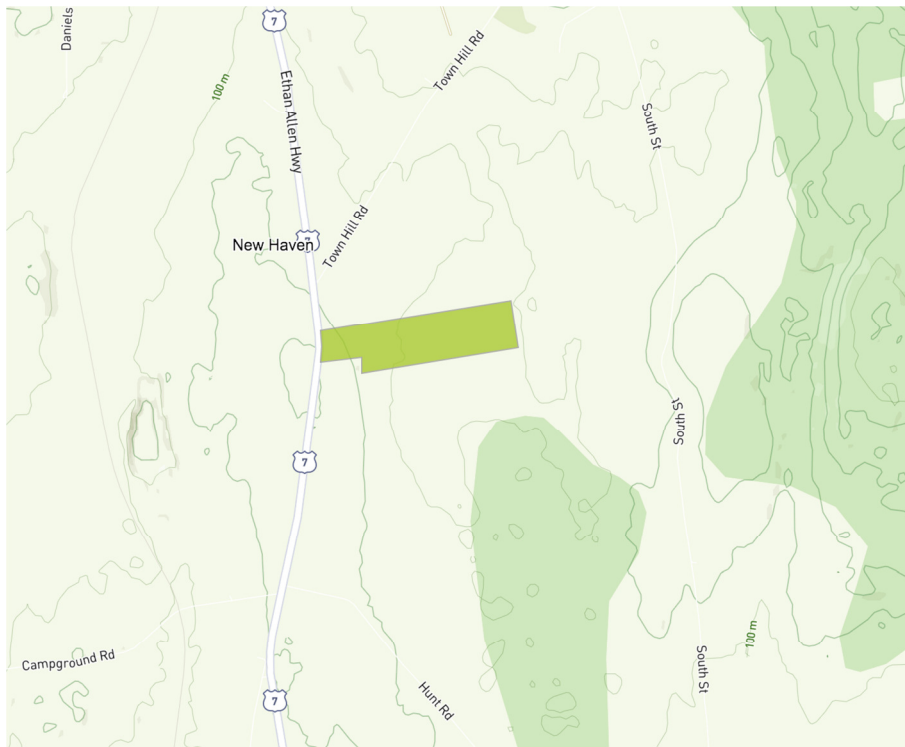
Due to the cultural, economic, agricultural and aesthetic significance of the Addison County Farm and Field Days, and the role the intact cultural landscape surrounding that location plays in the value of the Field Days site, the views from Otter Creek Highway and Field Days Road are designated as scenic viewsheds and must be maintained and preserved.

In 2004, New Haven Valley View, a joint project of the Champlain Valley Greenbelt Alliance and the MALT, was conserved to maintain a sweeping vista along Route 7 in New Haven of the Bristol Cliffs and Green Mountains. The 60-acre property was slated for development

until MALT and CVGA raise the necessary funds to protect it and help keep Vermont, and New Haven, open and scenic.

Seven million people travel Route 7 each year. This view, along with one in Shelburne preserved by the Dexter Fund were noted as two of the most important individual vistas seen from Route 7 between Burlington and Middlebury.

MALT conservation property, Route 7, New Haven Vermont. Source: MALT website.



The views from Main Street (Route 17) are those specifically referenced by PSB Chairman Dworkin in the VELCO case, quoted above.

South Street, running parallel to Route 7 and connecting the Village Center with River Road, is also designated a scenic corridor. The view from South Street which looks back to the New Haven Valley View is also designated a scenic viewshed.



View southward along South Street from the Village Green.

Photo: Mike Lawrence, landscape architect



Views along South Street epitomize New Haven's rural landscape and diversity of agricultural economy. Photo: Mike Lawrence, landscape architect.

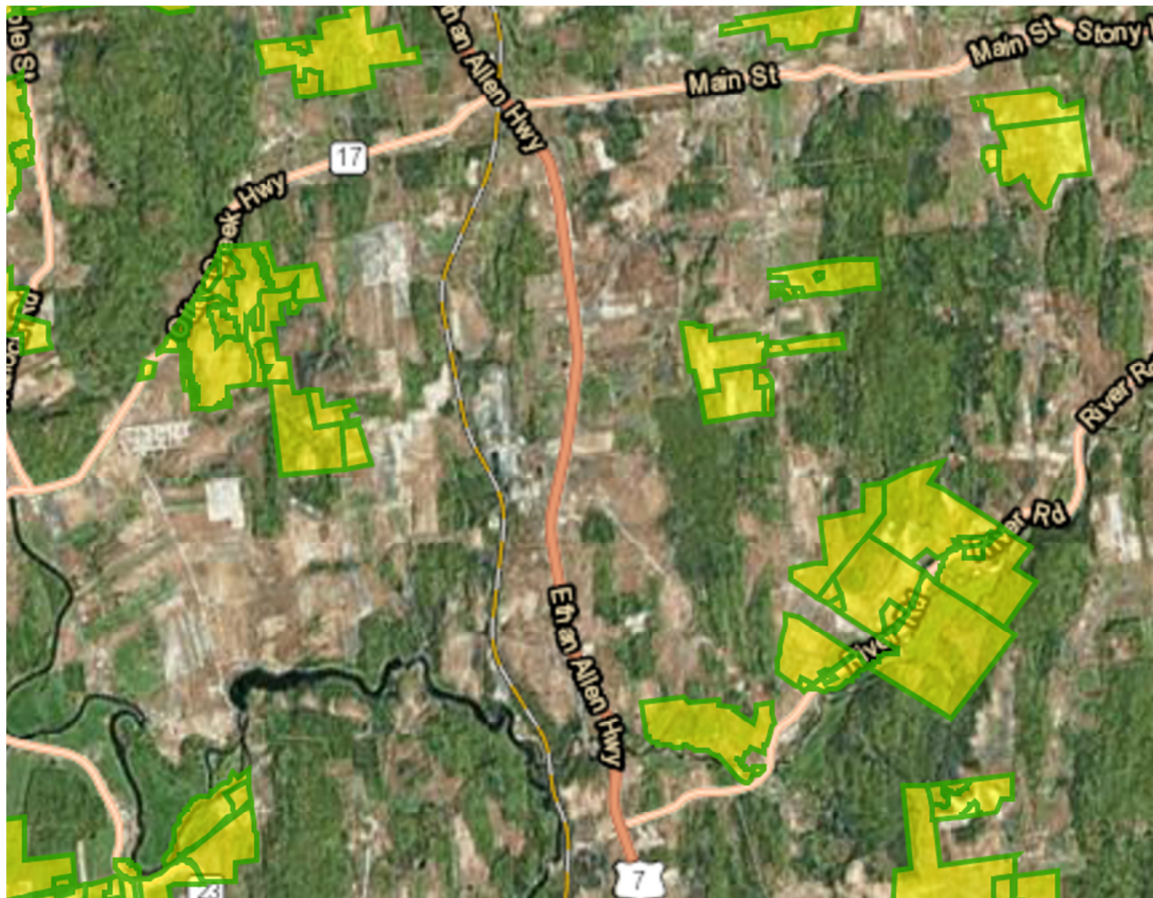
These designated scenic viewsheds are to be maintained and preserved. This does not mean that development within these viewsheds is prohibited; it means that development within these viewsheds must be appropriately sited and scaled, and if necessary augmented with visual mitigation such as landscaping in a naturalized style that

harmonizes with the hedgerows, forest blocks or other landscape features in which it is to be located.

The Town shall amend its zoning bylaws to implement this designation of scenic viewsheds. The Town will also explore additional measures for scenic viewshed protection including economic incentive and support measures.

These scenic viewsheds are primarily located within the Rural Planning District; specific design standards relative to that district for the purpose of maintaining New Haven's scenic beauty are contained in the Rural Planning District section of this Town Plan.

Vermont Land Trust conservation properties in New Haven, Vermont, help protect the Town's scenic resources and rural landscape while supporting the local agricultural economy. Source: Vermont Land Trust website.



Cultural Resources: Addison County Farm & Home Field Days, Inc.

Addison County has traditionally been an agricultural county, dubbed the land of milk and honey. The original Addison County Farm and Home Field Days, Inc. (Field Days), begun in 1948, was held at a different farm each year as a way for farmers to show their cattle, dealers to show new equipment and for farmers to socialize.

In 1967, Field Days purchased a piece of property in New Haven at the corner of Route 17 (Otter Creek Highway) and Field Days Road so they could have a permanent fairgrounds. In August 1968, the Field Days was held at its permanent location for the first time. Field Days has been held annually since, and the permanent fairgrounds has allowed for the continued expansion of the event. They now have stables devoted to housing horses, a building devoted to exhibits by the young people, and one devoted to exhibits of crafts, garden produce and the like, a maple producers building, several barns, a milking parlor, and several other buildings. The Fair and Field Days is small enough so that you can “see it all” yet large enough to encompass all aspects of rural agricultural life.

Field Days is listed as Vermont’s largest Agricultural Fair. In 2015, the five days of Field Days brought in between 40,000 and 44,000 paying visitors, amounting to approximately \$300,000 admission fees. This does not include the hundreds of volunteers and exhibitors that attended the event. This event forms the heart of Addison County’s rural communities, and is also attended by people from all over the state and beyond. Many of those people infuse the local economy with significant amounts of money while they are here for the Field Days. The New Haven Volunteer Fire Department uses this event as a fundraiser by manning the gates and selling tickets, raising approximately \$14,000 in 2015.

In addition to the week of Field Days in August, the site is used nearly every weekend from April through October for horse shows and other agriculture-related events. There is also a fundraiser each year held by a group of local people raising funds for families who have been affected by a disaster.



The heart of Addison County: View of the Field Days Road valley from the Addison County Fair and Field Days ferris wheel. Field Days celebrates Addison County's rural heritage in the context of a cultural heritage landscape reflecting New Haven's centuries of local farming. Photo: Melissa Plouffe

The preservation of agriculture, and protection of the natural, cultural, historic and aesthetic resources that create the town's unique character and sense of identity are evident in Field Days as they have been since its inception. It is the focal point of the Addison County farming community, and many New Haven residents as well as people throughout the county plan their yearly calendar around Field Days, preparing livestock for show or intricate handicrafts and artworks for the home and garden competitions. Children from farm families or participating in 4H and scouting groups spend weeks learning to lead their animals for show and learn to carry on our local farm-based culture.

Non-farm children and other visitors are introduced to Vermont's agricultural traditions in the petting barn. Antique farm implements are housed at the site and used for demonstration purposes. One of the highlights has been the hand-scythe mowing competition, which could become a lost art.

The view of this pastoral landscape from this highly public location of the Field Days fairgrounds, as well as along Route 17 -- the Otter Creek Highway -- approaching and leaving the fair, is an iconographic reflection of the cultural heritage of the Town of New Haven and of the farmlands of Addison County. The valley that comprises this viewshed is characterized by the 1971 TJ Boyle inventory as highly scenic as well as fragile -- intrusion of elements inconsistent with the rural character of this landscape will significantly degrade its quality as an intact rural landscape. New Haven supports and will continue to support the presence of the Addison County Fair and Field Days fairgrounds as well as the Field Days event and additional agriculture-related events in this location. The scenic viewshed surrounding the Field Days fairgrounds shall be preserved. No uses other than farm and related residences shall be permitted within this viewshed, and these uses shall be sited and designed to minimize visual impact from the fairgrounds and Route 17 to the greatest extent feasible.

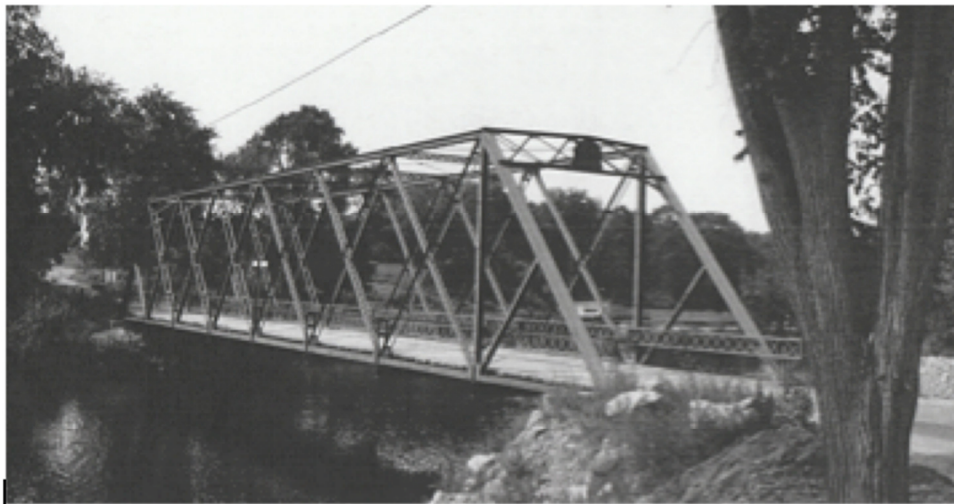
Historic Resources

The State Register of Historic Places presently lists the New Haven Village Historic District as well as 72 other sites in the Town. Four sites are listed on the National Historic Register. The Town encourages the preservation, renovation and restoration of existing structures and the maintenance of historic districts. The Town supports adaptive reuse of existing historical structures. The New Haven Historical Society (formed 1996) provides educational programs about the Town's past and works to conserve valuable reminders of our heritage.



The views of, and from, state-registered and National Historic Register listed and eligible properties shall be preserved, as they contribute to the cultural heritage and visual and economic assets of the Town. Development impacting the view of or from such historic resources shall include mitigation, including siting and screening, to protect such resources to the greatest extent feasible. The Town zoning bylaws shall be amended to reflect this policy of the Town to protect historic resources.

The State Register of Historic Places, including the map and descriptions of all state-listed historic sites in New Haven, is attached as an appendix to this Town Plan.



Rattlin' Bridge at Huntington Falls between New Haven and Weybridge



Land Use Plan 24 VSA §4382(a)(2)

Land Use and Rural Character

The primary land use goal of this Town Plan, which is widely supported by residents, is the protection of New Haven's rural character, including its agriculturally-based cultural heritage landscape, agriculture and other local business based economy, and the high quality of intact scenic landscape and viewsheds that exist and are maintained by these factors. The large box-store suburban sprawl ubiquitous to many urban shopping zones is incompatible and undesirable to New Haven residents and the Town. Maintaining rural character is a multi-faceted challenge, but this Plan and the zoning and subdivision regulations that implement it are tools by which the Town accommodates growth and change while remaining a vital, livable community.

Traditional rural development patterns are diverse and complex, arising organically from the evolution of historic uses of the land. Rural areas are distinguished from suburban areas by more than simply lower densities. Unlike the consistent pattern of land use, lot size, setback, building types that are characteristic of suburban landscapes, variety and diversity characterizes rural landscapes. There are, however, important common themes: The rural cultural heritage landscape, natural elements like wetlands and forest blocks, and terrain factors like rolling hills, vistas

and ridgelines, dominate the views and the development patterns throughout New Haven -- the built environment is not the dominant element in all but some very small tight segments of the town such as the Village Center, and in such areas, the human scale and historic architectural elements help tie that built environment to the surrounding landscape.

The National Park Service has developed guidance for identifying and protecting cultural landscapes. According to the NPS, cultural landscapes can vary in size from a small homestead to a region of thousands of acres, and are important due to how they reveal the history of residents' evolving relationship with the natural world. A **cultural landscape** is defined by the NPS as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values." There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes.

While there are historic sites, structures and districts within New Haven, the Town is primarily composed of an **Historic Vernacular Landscape**—a landscape that evolved through use by the people

whose activities or occupancy shaped that landscape. The NPS explains that through social or cultural attitudes of an individual, family or a community, the landscape reflects the physical, biological, and cultural character of those everyday lives. Function plays a significant role in vernacular landscapes. Examples given in NPS guidance documents include rural villages and agricultural landscapes such as those in New Haven.⁸

Maintenance of this valuable cultural landscape through future development that is compatible to and arises from historical land use patterns in the Town is important to the quality of life, environment and economy of New Haven. This Town Plan and the zoning and subdivision regulations that implement it are the tools by which New Haven seeks to protect its rural character. By prohibiting non-agricultural commercial and industrial uses from the extensive RA districts, and utilization of subdivision, PUD, site plan review, and conditional use regulation regarding a variety of uses in all districts, New Haven fulfills the directive from its residents to protect its cherished landscape and way of life.

Density Based Zoning. Conventional land use tools provided two basic options for rural residential zoning: require large lots, or require small lots. Large lots maintained low densities, but consumed more farmland than necessary and

promoted rural sprawl. Small lots resulted in development that is too dense, creating loss of rural character and a more suburban landscape.

For decades, New Haven used both options by allowing small lots along many Town roads and requiring large lots for land away from roads. Since the adoption of this approach, most of the Town's new homes and businesses have developed in a linear pattern along existing roads. If continued for another 30 years, this development pattern could significantly detract from the rural character valued by residents.

New Haven will adopt a density-based zoning model to offer flexibility in terms of dimensional requirements and residential land development in the RA districts, in order to maintain rural character while also keeping overall density low while allowing residential development to fit into the landscape in ways more suitable to protection of visual character. This allows for clustered development, which not only continues the traditional patterns of farmsteads and crossroads where multiple buildings are grouped together with large open spaces beyond, but also allows development to be located on the most suitable land. The Town will adopt density based zoning to ensure its effectiveness.

Density-based zoning discourages fragmentation of productive land by establishing a low overall density while allowing for creation of small house lots.

⁸ <https://www.nps.gov/tps/how-to-preserve/briefs/36-cultural-landscapes.htm>

The other commonly used option is the planned unit development (PUD), which encourages the allowable development on a property to be grouped together on smaller lots with a significant amount (usually at least 50%) of the original parcel set aside as open space or productive land.

The “view from the road” is extremely important in establishing the Town’s rural character. Together with scenic viewshed protections, subdivision review, PUD and conditional use review, which can require screening and design elements to mitigate visual impact, density-based residential zoning and the prohibition of incompatible uses from the RA zone helps preserve New Haven’s visual and cultural heritage landscape. As new development occurs in New Haven’s rural areas, this Plan and the land use regulation tools that implement it shall be employed towards maintaining or enhancing the Town’s rural character as described in this Plan and that view from the road to the greatest extent feasible. For example, where development is proposed on open land, new residences or farm buildings can be placed along the edges of fields or woodlands to reduce their visual impact and conserve productive farmland with less fragmentation.

New Haven’s land use regulations will be revised to implement density-based zoning in the rural parts of Town. The Town’s planned unit development (PUD) provisions, conditional use and subdivision regulations will also reflect

appropriate standards and incentives to achieve development patterns appropriate to their surroundings in conformance with the goals of this Plan. The Town needs standards that respond to the unique character and special concerns of the areas described in this land use plan. Incentives should be considered for projects that promote low-income or senior housing development, or projects that create a positive dramatic scenic impact.

Signs and Junk

Inappropriate signs as well as ‘junk’ such as garbage or excessive numbers of unregistered vehicles diminish the aesthetic beauty, quality of life and property values of the Town. During the planning process for this Town Plan, several residents encouraged the Town to clarify and bolster enforceability of zoning regulations in regards to both junk and business signs, particularly lighted signs and mobile signs. It is the Town’s policy to protect the aesthetic elements of the community in all zones, and not only in designated scenic viewsheds or noted scenic resource areas. The Town will revisit its zoning regulations regarding signage and junk to bolster this protection.

Lighting: Dark Sky Policy

The Town hereby adopts a Dark Sky policy to support the rural nighttime environment. Dark skies create a restful nighttime environment conducive to human health and the natural nocturnal ecology. Dark skies at night play a

contributing role in rural culture, including star gazing, the sense of open space, and the opportunity to observe nocturnal wildlife.

All outdoor lighting in the Town shall be designed and installed to minimize glare, light trespass, and sky glow. Lights shall be aimed downwards to illuminate paths, doorways, driveways or roadways rather than lighting up the sky, and shall be appropriately shielded, screened, and limited in duration by use of timers or motions sensors to contain the light to the area where it is needed, and when it is needed.

The Town shall amend its zoning bylaws to incorporate specific lighting standards consistent with this policy, and shall specifically consider whether and where adoption of the Illuminating Engineering Society/International Dark Sky Association recommended zones LZ-0,

LZ-1 and LZ-2 may be appropriate within the Town.

Noise. Like the dark night sky, quiet surroundings contribute immensely to the rural environment of New Haven. Noise from individual or transient loud events as well as noise which arise out of cumulative increases in traffic and machinery use degrade this important element of the Town and diminish the rural character and quality of life. It is the Town's policy to prohibit property usage that creates noise levels at the property line, or at the boundary of the area of a project's legal control for development occurring by lease or easement on less than a full parcel, in excess of 45dBa between 8 a.m. and 5 p.m. Monday through Friday and 40 dBa at all other times. The Town shall revise its zoning regulation performance standards to insure that standards meeting, or exceeding, this policy shall be enforceably imposed on all future development.

Land Use Planning Areas

Overview

This plan sets forth the following policies and restrictions to conform future land use and development in New Haven to the goals and policies of this plan. As shown in Figure 8, the Town has been divided into a number of land use planning areas including the Municipal District, New Haven Village Center Planning Area, New Haven Mills Planning Area, Business Planning Area and Rural Planning Area.

This land use plan establishes restrictions on the general type, location, scale, distribution, pattern and character of future land uses in Town. The land use planning areas should not be interpreted as zoning districts, although they will form the basis for future revisions to the land use regulations. It should not be assumed that each planning area represents a

single zoning district. The Town's land use regulations and zoning map will be used to determine the specific land uses permitted and the densities and dimensional requirements established for a given property.



Open fields, forest blocks, and low-density residential and farm development characterize New Haven's Rural Planning Area, and create an attractive 'view from the road' (in this case, South Street). Photo: Mike Lawrence, landscape architect.

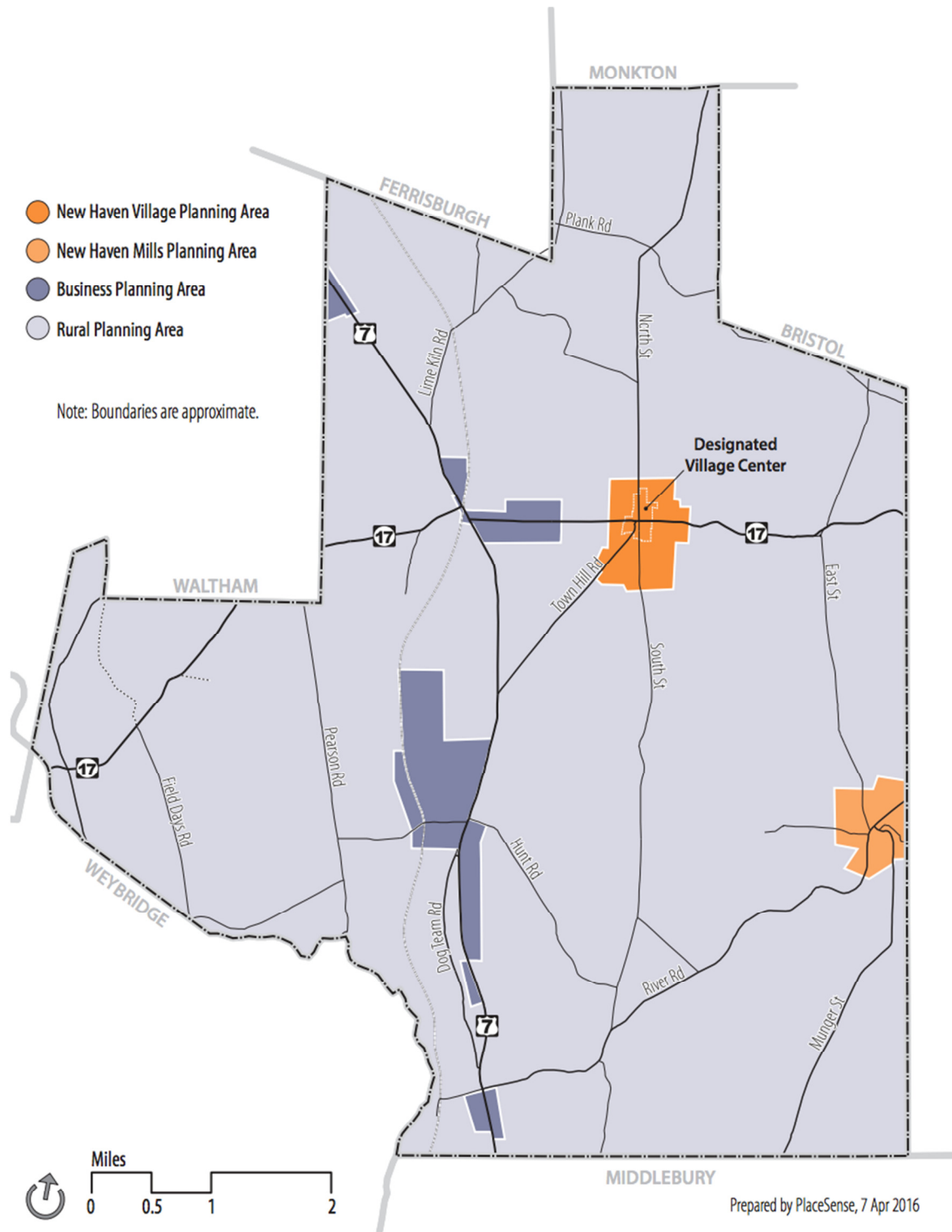


Figure 28. LAND USE PLANNING AREAS MAP

(Note: Base map omits the Town Trail and a small segment of the North South Highway; see VTRANS map for these elements, and Note Regarding Maps elsewhere in this Plan. Potential Municipal District is not indicated, but is intended to comprise the

Town and School-owned lands on which the Town Offices, Library and School are located. In addition, the northerly boundary of the southernmost Business Planning Area is intended to be Belden Falls Road on the west side of Route 7 and River Road on the east side of Route 7)

Municipal District

There will be a Municipal District created that includes land owned by the Town and School in the Village Center and on Main Street.

New Haven Village Center Planning Area



Village Green Market, New Haven Town Green. Photo: Mike Lawrence, landscape architect

Character. New Haven village should remain the Town's primary center. This planning area includes the Town's designated village center. The desired character of this planning area is that of a traditional New England village center. Specifically, it should be a place that has:

- A mix of uses in close proximity to each other bringing people together for a variety of activities –including Town affairs, workplaces, residences and recreation,– attracting and benefiting people of all ages and income levels.
- A physical layout with higher densities in comparison to outlying areas and a distinct, defined geographical edge that establishes an identity or a sense of place.
- A strong public presence, such as greens, recreation fields, municipal buildings, school and/or other public spaces or buildings. During the planning process for this

Town Plan, several residents also commented on the need to beautify these spaces to enhance the aesthetics and quality of life in the community.

- A presence of special features, such as historic buildings and landmarks.
- Diversity in the size of buildings and lots reflective of the scale of existing historic buildings.
- A pedestrian-friendly environment and a transportation system that is designed for pedestrian safety, as well as vehicular access.
- Parking that provides safe ease-of-access while not detracting from the historic and pedestrian-friendly aspects of the area.
- Multi-story and mixed-use buildings with main entrances oriented to the street.

Density and Uses. The Village Center planning area is and should continue to be where the most compact and highest intensity residential, commercial and mixed-use development occurs in Town. Most of the Town's public uses such as Town offices, school and library are and should continue to be located in the Village.

The potential for new development within the Village Area is limited, so use of land within this area should be maximized. Densities should be as high as can be accommodated given the availability of infrastructure and soil capabilities. Dimensional standards within the Town's zoning and subdivision bylaws shall reflect and extend the existing historic settlement pattern in this area.

Some buildings in the Village Planning Area could be renovated into multi-unit or accessory dwellings. Town regulations will support such re-use of existing buildings and allow for housing options other than single-family detached homes in this area. If new multi-unit buildings

are to be built, converted or renovated in the Village Center, their design must be compatible to the historic development pattern and style of single-family homes.

In regulatory review, the Town will consider development proposals utilizing smart growth planning techniques that would cluster development in areas that can provide pedestrian access, decreasing reliance on automobiles. This serves both a conservation function and to meet the needs of a growing population of older residents. This area would be an appropriate place for elderly housing, which has been recognized as a need by current residents.

Commercial uses maybe permitted to the extent that they are compatible with the expectations of adjacent residential use in the village and are in conformance with this Plan and its implementing regulations. The Town's zoning and subdivision bylaws more specifically define the types of businesses allowed in the Village, while prescribing their scale and impact.

State Designations. The state has recognized a portion of the Village Center Planning Area as a historic district and has inventoried its contributing historic structures. The importance of these historic resources are critical components of the character of this area and the Village Center's sense of place. Town regulations shall ensure that they provide flexibility for the ongoing use of historic structures and discourage demolition or inappropriate renovations.

The Town's Village Center designation

New Haven Mills Village Planning Area Character. Historically, New Haven Mills was one of several distinct centers in Town and it was focused around the waterpower resources of the New Haven River. Currently, this area is primarily residential, with a core of historic homes on small lots.

Density and Uses. There is limited potential for additional development within the core and this Plan envisions continued moderate density uses, primarily residential in this area. Higher density zoning standards will be implemented in this area, with consideration of incentives for clustered, energy-efficient, affordable or other types of residential development that further the goals of this plan.

Rural Planning Area

Character. The rural planning area is the heart of New Haven's scenic and cultural resources. This area defines the cultural heritage and quality of life of the Town, and contributes immensely to the Town's

has made income-producing properties eligible for state tax credits, which should be used to support maintenance and appropriate rehabilitation of historic structures. Village Center designation has also enhanced the Town's ability to obtain grant funding for public improvements in this area. The Town will make all reasonable efforts to maintain its Village Center designation and to remain abreast of, and take advantage of, potential grant programs or other opportunities to enhance and maintain this Village Center.

agricultural economy and robust property values. The character of this area is agricultural and rural residential with relatively low- to medium-density residential development typically sited close to Town roads or on private roads. Flexible, density-based residential development standards in this area, together with preclusion of non-compatible land uses, will be implemented through subdivision and zoning regulations to preserve farm land and scenic viewsheds. In general, this would not constitute a change in overall density, but allows flexibility to place house lots as best suits the individual property. Clustering of homes on smaller lots, rather than dispersed development, is encouraged in order to conserve larger areas of productive or open space land.

Development. This planning area includes most of the Town's productive agricultural land. All available and feasible means shall be used to preserve prime agricultural farmland and

limit development that is out of character with the traditional landscape. For example, large-scale, fragmentary, and sprawling residential development in this area is prohibited. Commercial and industrial development is prohibited with the exception of agriculture, forestry, a limited number of specific outdoor recreation uses, and appropriately sized and located home businesses and home occupations. Over all, density of development must remain low, with any additional non-farm residences carefully sited to minimize impacts on quality farmland and scenic and natural resources.

Specific design standards shall apply to new development in the Rural Planning Area in recognition of the existence of a concentration of agricultural and forest lands to protect the extraordinary scenic resources such lands and uses provide. Any land use in this area, including single-family dwellings, shall require approval under those regulatory guidelines. Development other than agricultural structures or single family residences developed on lots existing as of January 1, 2017 in this area shall not be sited in prominently visible locations on hillsides or ridgelines, and shall, at a minimum, utilize earth tone colors and non-reflective materials on exterior surfaces of all structures, and must minimize clearing of natural vegetation. Agricultural structures and single family residences shall be encouraged to follow the same guidelines, and/or to harmonize

the structure with the surrounding built and natural environment.

Conservation and Resource Protection. As illustrated on the resource maps included in this plan, New Haven has significant natural areas with characteristics that seriously constrain development. The Town's zoning and subdivision bylaws shall protect the Town's wetlands, flood hazard areas, riparian areas, important habitat, areas with shallow soil, and other natural areas. Such lands should be kept in active agricultural or forestry use, or in their natural state.

Land uses permitted in these areas must be compatible with the limitations of these areas, such as agriculture, forestry and low-impact outdoor recreation. Uses allowed in such areas are severely limited in order to conserve these important agricultural and natural resources. Development proposals in these areas are reviewed to determine potential impact on sensitive natural resources, access and scenic considerations.

Buffers of land must be retained to minimize the impacts of any development on sensitive resources. This is particularly important along streams and wetlands, where poorly planned development can result in reduced water quality, and increased flood and erosion hazards. The Town's land use regulations will include provisions for creating riparian buffers when development may affect water quality.

Business Planning Area

Character. Route 7 does not have a continuous stretch of development along both sides throughout the whole length of Town. There are still many open areas with farmland and forestland. During planning workshops held in 2008 and October 2015, participants clearly expressed a desire to see a mix of open land, business and residential uses along Route 7 in New Haven.

Protecting the scenic qualities of the Route 7 corridor is critical to maintaining the rural character and quality of life New Haven residents currently enjoy. People's sense of a place is often largely based on the 'view from the road' that they see while traveling on their daily commute or while touring on vacation. Most people's perception of the entire Town of New Haven will be largely based on their experience traveling on Route 7. The residents of New Haven overwhelmingly support preventing the highway corridor from becoming a fully developed commercial strip. Recent survey and forum results express that residents are opposed to further expansion of the commercial zones at this time.

Density and Uses. New Haven Junction is one of the Town's traditional industrial centers. Regarding the New Haven Junction, industrial and commercial development in and about the surrounding wetlands is not recommended. In addition, traffic flow safety through the railroad land easement, together with the significant

incline of Route 7 at its intersection with the railroad tracks, dismisses this area as a viable commercial development site. The Town recognizes that there are significant environmental and development constraints that will limit future development and expansion in this area.

The character of development around the two major intersections at the junction should be carefully considered, as they serve as gateways to New Haven for many travelers. The availability of rail access and the presence of the Town's historic rail station should be recognized and highlighted as important resources in this area.

The area around Campground Road is where much of the commercial and industrial development in Town has occurred in recent decades. The Town's land use regulations should continue to allow for ongoing mineral extraction in this area, along with compatible industrial activities in areas not visible from Route 7, but with access to the rail line. In reviewing industrial uses, the Town should consider the impacts of the proposed use including traffic, noise, light and pollution, and require adequate buffers between industrial and non-industrial uses.

The size, scope and impact of commercial uses along the state highway will be subject to site plan review for consideration of neighboring residences, the visual character of surrounding land

and the transportation function of the highway, and to further comply with the goals in the Town plan for economic Residents are content with the scale and intensity of commercial development currently in New Haven. The Town's zoning regulations will more specifically define the size of commercial buildings to limit impacts to the rural, scenic character of the Route 7 corridor, and to maintain a village scale of development. Limiting the size and scale of commercial buildings would support a diversified economy consisting primarily of small, locally-owned businesses. It has been shown that locally-owned business contribute more to a community's economic vitality by keeping dollars circulating in the local economy.

Access Management. It is recommended that access to all commercial and industrial areas be limited in number, if necessary by use of multi-lot access roads, to promote safety and to ease traffic flow on public roads. The Town's land use regulations will require that commercial or industrial property be of a size that allows ample room to set new development back from the highway and put landscaping in place to reduce the

development to serve the needs of residents and those who travel through Town on the busy highway corridor. impact of higher intensity land uses.

Open Land along the Route 7 Corridor.

Lower density areas of land use will separate the commercial and industrial areas from residential and agricultural areas, and they will be maintained as low-density residential or open space/agricultural land. This will ensure that the Town's commercial and industrial areas remain distinct areas and that strip development does not slowly spread out along the entire highway.

Open space and agricultural lands adjacent to Route 7 outside the designated commercial and industrial areas will be considered high priorities for conservation efforts. The financial incentives of conservation (price paid for development rights, income tax benefits and/or reduced property tax burden) should be used to assist landowners who want to keep their land open or in agricultural use. The Town should work with willing landowners, land trusts and other organizations to conserve as much land outside the designated commercial and industrial areas as possible.



Agriculture and Business Uses. Business uses outside this planning area should be limited to home occupations and home businesses. However, it should be recognized that much of the Town's land is in productive use for the Town's primary industry: farming.

Home occupation, home businesses and land-based businesses should be permitted to the extent that they do not alter the character of the area or decrease quality of life for nearby residents. Expansion of traditional agricultural business activities that add to farm income is recognized as an effective way to minimize future residential development of the Town's rural lands by supporting opportunities for other income-producing uses.

Home-based businesses provide local employment and incubator space for small businesses, providing appropriately scaled economic development in New Haven.



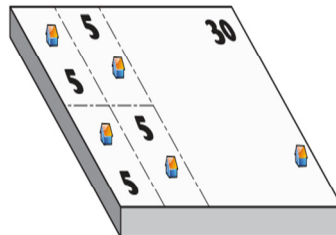
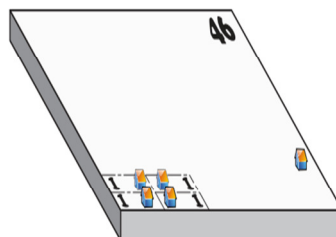
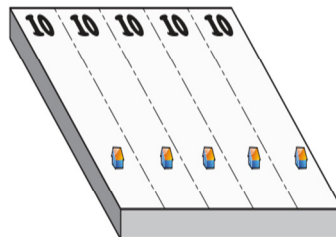
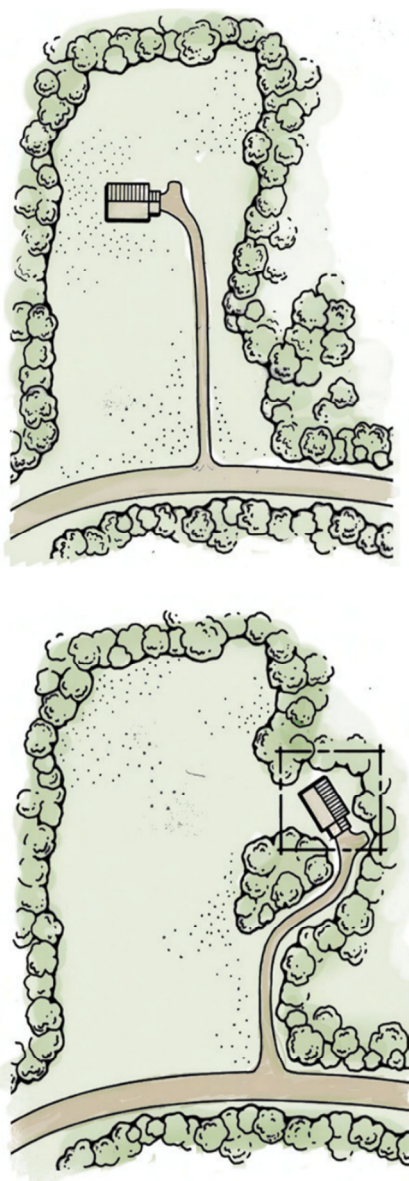
Benefits of Density-Based Zoning and Siting Standards



Small subdivision designed as a PUD with homes clustered onto small lots with protected open space.

Density-based zoning allows for clustering of residences in order to maintain larger unfragmented blocks of open space, such as farmland or forests.





Under conventional RA-10 zoning, this 50-acre parcel could be subdivided into a maximum of five 10-acre lots. Under density-based zoning, the parcel remains limited to 5 total homes/lots, but the landowner can subdivide into lots of various sizes.

Siting standards in Subdivision or PUD review enhance the visual landscape and also help maintain open space.

Compatibility 24 VSA §4382(a)(8)

Neighboring Towns. This plan is generally compatible with the plans of neighboring Towns as described below:

- Middlebury has designated the land along most of its border with New Haven for agricultural and rural residential districts. Similarly, most of the land in New

Haven along the Middlebury Town line is within the Rural Planning Area. New Haven does have an area designated for commercial and industrial use along the Route 7 corridor at the Town line, which is not continued in Middlebury. However, Middlebury has an industrial area designated nearby

(west of the highway and south of the Town line).

- Much of the New Haven - Weybridge Town line is formed by Otter Creek, whose floodplains extend along the bordering lands in both Towns. Therefore each Town has planned for low-density residential and agricultural uses along their shared boundaries.
- Waltham and New Haven are both planning for low-density rural residential and agricultural uses along their shared border. New Haven does have an area designated for commercial and industrial use along the Route 7 corridor at the Town line, which is continued along the east side of Route 7 in Waltham. However, there are non-residential uses along the highway in both Towns that pre-date zoning, which result in a compatible land use pattern as one travels along Route 7 between the two Towns.
- Ferrisburgh and New Haven are both planning for low-density

rural residential and agricultural uses along their shared border.

- Monkton and New Haven are both planning for low-density rural residential and agricultural uses along their shared border.
- Bristol is planning for primarily rural and agricultural land uses along its shared border with New Haven, which is similar to the low density planning area described in this plan. Bristol also has an area designated for conservation uses, which connects to a similar area in the northern section of New Haven.

Regional Plan. This plan is compatible with the Addison County Regional Plan. New Haven is planning for a development pattern primarily characterized by a traditional village center surrounded by rural countryside. This is compatible with Overall Goal A of the Regional Plan, which supports development patterns that will maintain the historic character of the region, namely urban centers and villages separated by rural countryside.



Recommended Actions

Implementation 24 VSA §4382(a)(7)

New Haven sets ambitious goals for itself in the coming years to implement the ideas, policies and goals set out in this plan.

- Action 1. The Town's zoning and subdivision regulations need to be updated by the New Haven Planning Commission. This Town Plan specifically speaks to a need for the following:
- A. Review and, if necessary, revise the Town's zoning and subdivision bylaws to promote compact village growth, cluster development and encourage settlement patterns that reduce travel requirements for work, services, shopping and recreation; adopt density-based zoning.
 - B. Revise the Town's zoning and subdivision bylaws to include incentives for creation of well-constructed, affordable, energy-efficient, low-maintenance and/or smaller homes for singles, young couples and elders whose needs are not well met by New Haven's existing housing stock, including attached and rental units.
 - C. Require thoughtful planning and design of development to protect designated scenic views of open land and mountains so valued by residents of successive generations and by visitors.
 - D. Consider the fiscal impact on municipal finances and the Town's taxpayers of proposed projects as part of the development review process.
 - E. Consider the impact of new or expanding businesses on the existing transportation network as part of the development review process.
 - F. Prepare and adopt guidelines for all new driveway and road construction to ensure the adequacy and safety of emergency vehicle access.
 - G. Adopt subdivision regulations relative to development of subsized and lawfully sized lots by lease or easement, consistent with this Plan.
 - H. Adopt commercial and energy siting and solar screening and setback bylaws consistent with this Town Plan, and adopt provisions as necessary to ensure that no §248 facility shall have the effect of

converting the land use classification of any parcel or portion of a parcel of land to a more intensive use than that of the zone in which the parcel is located.

- I. Explore methods of incentivizing energy efficient residential and commercial development through its local zoning and subdivision regulations and local energy assistance programs.
- J. Adopt signage, junk, noise, height, and dark sky regulations consistent with and implementing the policies set forth in this Plan.
- K. Review and, if necessary, revise the Town's land use regulations to ensure protection of waterways and wetlands, creating riparian buffers when development may impact water quality.
- L. Revise the Town's zoning regulations as necessary to more specifically define the size and location of commercial buildings to limit impacts to the rural, scenic character of the Route 7 corridor, and to maintain a village scale of development.
- M. Amend zoning regulations to reflect the policy of the Town to protect historic resources.
- N. Update the base maps used in this Town Plan to accurately reflect the status of Town roads, trails and facilities, as well as to reflect the location of a Municipal District and potential electrical generation sites.

Action 2. Town Administration

- A. Prepare and adopt a Capital Improvement Plan in order to budget for future capital expenditures and to allow tracking of cost vs. benefit of public improvements needed to accommodate future growth.
- B. Analyze the impact of growth on the Town's need for routine services and for increased capital expenditures.
- C. Seek opportunities for energy cost savings in all Town buildings, facilities and operations to stabilize or reduce future annual operating costs, including but not limited to the purchase and/or installation of

the most efficient lighting, insulation, heating systems, equipment and vehicles.

- D. Develop a management plan for all Town-owned lands to insure that appropriate management practices are applied to each of these public assets.
 - E. Implement Vermont Clean Water Act of 2015's requirement to bring Town roads into compliance with the statewide Municipal Roads General Permit.
 - F. Make all reasonable efforts to maintain its Village Center designation and to remain abreast of, and take advantage of, potential grant programs or other opportunities to enhance and maintain this Village Center.
 - G. Adopt design standards for the Rural Planning Area to protect the extraordinary scenic resources such lands and uses provide.
 - H. Develop and adopt a scenic resources protection plan.
-

Action 3. Conservation and Energy

- A. Identify and map areas of significance to residents and seek opportunities to provide for their continued public use or enjoyment, or permanent conservation as appropriate.
- B. Work to identify, map and protect significant scenic viewshed resources.
- C. Explore options for a Town Conservation Fund and other methods of pursuing economic support for landowners, particularly farmers, for viewshed and conservation protection.
- D. Submit this plan for certification by the Regional Planning Commission or to the Commissioner of Public Service for an affirmative determination of energy compliance.
- E. Encourage weatherization and other cost-saving measures by distributing information about available programs to Town residents and collaborating, when appropriate, with our utility or local nonprofit organizations in other steps to promote energy conservation.

Action 4. Transportation

- A. Provide parking for public transit users in existing parking lots on commercial, Town, or state property; maintain the Town's park-n-ride.
- B. Participate in and encourage increased public transportation options, including bus and rail, as such opportunities arise.
- C. Promote and encourage bicycling and bicycle safety by working with federal, state and private funding sources to make Town roads safer and more bicycle-friendly whenever such opportunities arise.
- D. Explore options to create and bolster local rideshare and volunteer driver programs to facilitate carpooling for energy efficient transportation to destinations within and beyond the Town.

Action 5. Agriculture

- A. Adopt a right-to-farm ordinance outlining the agricultural community's right to conduct business in proximity to residential areas.
- B. Explore options for sustaining the local agricultural land base into the future, including encouraging maintenance of intact large and adjacent farm parcels, and discouraging or precluding inappropriate development on agricultural soils
- C. Explore options for supporting the agricultural economy, including encouraging diversified agricultural and agriculture-related business uses of smaller parcels including farm stands and local food production.
- D. Develop strategies for further economic support of agricultural lands and local farming businesses such as a conservation fund or transfer of development rights.

Action 6. Economic Development

- A. Work to attract small businesses and related services to locate in Town.
- B. Maintain a listing of New Haven businesses on the Town web site, to

encourage Townspeople to support local businesses and buy local products.

- C. Allow for the expanded definition of home-based businesses when compatible with existing neighborhoods.
- D. Focus on bolstering an economic development plan with evidence-based options for enhancing New Haven's local economy.

Comments made by residents at Community Forum:

"Encourage working people and tax payers to move here, build houses and raise children."

"We are turning into a pass-through town because we are not focusing enough on our village and community."

"Retain Agricultural Land."

"Small (or all) farms should have more flexibility in marketing products to consumers."

"Develop sustainability instead of growth."

"Encourage Home Based Business"

"Incentives for new businesses and light industry."

"I am more concerned with the siting and other concerns (such as environmental impacts on animal/bird habitat) than size per se."

"In addition to screening solar projects, consider wildlife habitat preservation as far as siting concerns."

"Solar projects ... should not break up land currently used for agricultural purposes...."

"Large scale solar is not appropriate for our town. Personal/home installations are fine."

"Energy that stays in state, benefit to town and residents."

"Consider/implement a process where all new construction of buildings are reviewed and the town can encourage siting for rooftop solar (orienting south facing roof to due south)."

“Encourage solar technology to design and implement less obtrusive ways of harnessing the sun!”

“Although I consider myself a strong environmentalist, I don’t believe we can meet the legislature’s new energy goals via wind and solar generation without significantly damaging one of our key state resources: the Vermont landscape.”

“Strongly favor rooftop whenever possible.”

“Going green is okay, but siting of project and size is crucial.”

“Retain its beauty.”

“It is important to preserve as many viewsapes in town as possible.”

“We would love to maintain a rural and undeveloped natural landscape!”

“Stay Rural! Keep agricultural beauty.”

“Compensate for protected views.”

“Develop a Town Conservation Fund.”

“We Support Agriculture: Explore transfer of development rights from Agricultural to Residential.”

“Regulate light, noise and scenic pollution.”

“Add sound limit to Town Plan.”

“Limit noise levels.”

“The way to save farmland is to make nice walkable towns for people to live in.”

“We should have more town community wide activities to bring residents out to meet with neighbors, plus bring people into our town from outside Addison County.”

“Concentrate new development in or adjacent to existing ‘hubs’ e.g. Village, Junction.

Encourage increased density at those locations.”

“More Flowers in Town!”

“Plant trees!”

“More sidewalks!”

“No additional commercial zoning”

APPENDICES

- A. Town Plan Process and Community Input
- B. Historic Resources
- C. All Hazards Plan